

PREPA proposed to raise the charge above cost to include a penalty feature, but then withdrew that proposal.²⁷⁵

Directive

PREPA shall raise each reconnection charge to its cost level: \$50 for secondary customers and \$500 for primary customers, adjusting its revenue requirement accordingly. This change aligns the charge with PREPA's estimates of actual cost. Any future changes in fee schedules require Commission approval.

F. Unbundling

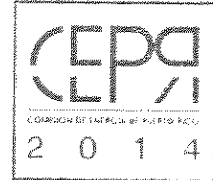
371. PREPA's consultants proposed to "unbundle" rates, by separating PREPA's costs into generation, transmission and distribution. They claimed that "unbundling of tariffs is necessary in order to properly price the subcomponents of electric service used by each customer and avoid cross-subsidization."²⁷⁶

372. As we have stated regarding other PREPA proposals, this short, intensive rate proceeding is not an optimal time to consider this type of proposal. Furthermore, simply disaggregating generation, transmission and distribution does not provide customers with information truly relevant to their decisions. The consultants' "unbundling" proposal ignores the elementary distinction between cost unbundling (separate statement of costs) and service unbundling (allowing customers to purchase certain services without purchasing others, as in buying coffee without the coffee cup). In addition, the information relevant to both cost unbundling and service unbundling is not merely generation vs. transmission vs. distribution, but avoidable vs. unavoidable costs, sunk costs vs. future costs, and strandable costs vs. non-strandable costs. Therefore, the proposed "unbundled" rates are rejected.

373. The consultants' bid to unbundle is not an essential part of a rate case whose chief purpose, in the short time available, is to determine the revenues PREPA needs to operate. Developing and submitting this proposal was not a good use of PREPA's resources, which are ultimately paid for by the ratepayers. When the Commission determines the time is right to discuss unbundling, it will initiate an inquiry and determine what information PREPA must provide. Until then, PREPA should avoid treating its customers like a bank account from which it draws money each time its consultants wish to advance ideas. It is better to ask the Commission first whether such spending is worth the customers' money.

²⁷⁵ CEPR-RS-01-14 at 7. Commission's Fourth Request of Information (July 15, 2016).

²⁷⁶ PREPA Ex. 4 at 28.



III. Riders

374. For some components of the revenue requirement, regulators may use riders to recover the costs separately from all other costs. PREPA proposes special riders for fuel, purchased power, CILT and a group of costs and discounts collectively referred to as "subsidies."²⁷⁷ The Commission also has required PREPA to create a rider for energy efficiency expenditures, although we have not approved dollars for that rider. These matters are discussed next.

A. Fuel and purchased power

375. Currently, PREPA recovers all of its fuel costs and purchased-power costs through separate but similar Fuel Cost Adjustment ("FCA") and Purchased-Power Cost Adjustment ("PPCA") cost riders. It sets and reconciles the riders on a monthly basis.²⁷⁸ Most other costs are recovered through base rates. CILT and subsidies were recovered through the FCA and PPCA by means of a "gross-up" produced by dividing the adjustment revenues by 0.89 (which is equivalent to adding about 12.36% to fuel and purchased-power costs).

PREPA proposes to modify three aspects of the cost-recovery mechanisms:

1. Move the recovery of CILT and subsidies from the FCA and PPCA gross-up to separate riders, as required by statute.
2. Recover the projected fuel and purchased-power costs at the time of the rate-case filing through base rates, while recovering any difference between those base cost levels and updated projections through the riders.
3. Reconcile differences between actual and projected costs quarterly rather than monthly, unless a large difference justifies performing the reconciliation sooner.²⁷⁹

376. PREPA believes that including some fuel and purchased-power costs in base rates will reduce "the volatility of the FCA and PPCA factors," facilitate "some rate designs which PREPA may wish to implement in the future," and avoid "frivolous litigation".²⁸⁰ We are not convinced that PREPA's proposal will have these benefits. In absolute (cents-per-

²⁷⁷ The content and form of the subsidies rider is discussed separately in Part Three-IV below.

²⁷⁸ Reconciliation, also called true-up, refers to recovering the difference between actual costs and revenues previously established to collect projected costs.

²⁷⁹ Schedule J-1 REV at 49-52.

²⁸⁰ PREPA's Brief on Substantive Issues at 86.



kWh) terms, the volatility of the riders would be the same, whether they include the entire fuel and purchased-power costs or only the deviation from the rate-case filing. In percentage terms, the riders would be more volatile if they reflect only the deviations from the base value. As for rate-design options, Mr. Chernick explains how PREPA can build even very large time-of-use variations into the base rates.²⁸¹ Finally, PREPA has not explained how the fuel and purchased-power riders attract frivolous litigation, or why such litigation would be avoided by changing the tariff structure. Moreover, separating the fuel costs into a base portion and a rider portion will make the tariffs and bills more complex and confusing for customers. That is particularly true in the current situation, in which the projection of fuel costs PREPA presented in its original rate application has turned out to be understated, requiring a large FCA from the effective date of the new rates.

377. We approve PREPA's proposed quarterly reconciliation and update of the FCA and PPCA, along with the concept of an accelerated adjustment in the event of a major change in expectations during a quarter. We are concerned that PREPA's definition of a major change as a 10% difference in the estimated quarterly cost of the rider may not be sufficiently protective of PREPA's financial position under some circumstances and may result in unnecessary adjustments in other situations. For example, a 5% increase in fuel prices on top of \$100/bbl oil would have a larger effect on PREPA's cash flow than a 10% increase on \$30/bbl oil; under PREPA's proposal, the first situation would not trigger an early adjustment, but the second would. Similarly, PREPA's fuel costs may increase due to an outage at one of the co-generators, or vice versa; if forecast fuel costs rise 10% and purchased-power costs fall 10%, the PREPA proposal would require early adjustments in both riders, even though the two effects would be partially offsetting. And if the fuel and purchased-power forecasts both rose 9%, PREPA would be subject to more stress than if purchased-power costs rose 10% and fuel costs fell slightly; again, PREPA's proposal would result in early adjustment in the less stressful case, but not the more stressful one.

378. We therefore will define a combined dollar level, rather than separate percentage levels, to initiate early adjustment in the FCA and PPCA.

Directives

- 1. All fuel and purchased-power costs shall be collected through the riders, zero through base rates.**
- 2. The riders shall be updated quarterly. PREPA shall include an acceleration provision that is triggered upon a finding by the Commission that the combined difference between projected costs and projected revenues for the FCA, PPCA and the energy-efficiency adjustment in the current quarter exceeds \$20 million.**

²⁸¹ Chernick Report at 89-92.



3. ***PREPA shall correct all erroneous language in the draft riders and submit the revised language to the Commission for approval.***

B. CILT

379. PREPA has proposed that the CILT rider, which will collect the costs of providing statutorily mandated amounts of free electricity to municipalities, be applied to all loads other than the fixed blocks of the RFR tariff. The charge for the RFR fixed blocks are specified by Act 22-2016, with any excess to be priced at the rate for the non-subsidized GRS tariff.

Directives

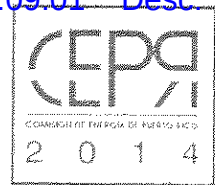
1. ***The Contribution in Lieu of Taxes (CILT) shall no longer be collected by PREPA via the 0.89 factor that had been in the denominator of its Fuel and Purchased Power Adjustors. Rather, CILT will be collected through a separate rider. The FY2017 CILT amount shall be \$51,783,821.²⁸²***
2. ***Customers in the RFR class shall be exempt from the CILT as applied to the fixed block consumption charge, but shall pay CILT for consumption exceeding the fixed block.***
3. ***PREPA shall correct the erroneous language in the draft rider and submit the revised language to the Commission for approval.***
4. ***Reconciliation of the CILT rider shall occur annually with each budget examination or three-year rate case filing, whichever applies.***

C. Energy efficiency

380. As required by the Commission's rule on Filing Requirements²⁸³, PREPA proposed an energy efficiency rider to recover expenses related to the implementation of energy efficiency and demand-side management programs. The rider would create an Energy Efficiency Charge ("EEC") that would recover the costs of energy efficiency programs from all customers on a per kilowatt-hour basis. PREPA proposes that the EEC (in \$/kWh) be calculated as the total cost of energy efficiency programs (in \$) divided by the total gross retail sales (in kWh).

²⁸² See Attachment 4, page 2 of 2.

²⁸³ Regulation 8720, New Regulation on Rate Filing Requirements for the Puerto Rico Electric Power Authority's First Rate Case, March 28, 2016, Section 2.12(D).



Directive

The Commission will address the details of this rider when it determines energy efficiency programs, providers and budgets. For now, PREPA shall revise the rider to correct drafting errors and to provide for annual adjustment and reconciliation.

D. General

381. The Commission was disappointed to discover that the language for the riders on energy efficiency, load retention discount and other purposes, prepared by expensive consultants at ratepayer expense, contain multiple errors, resulting from a hasty copying of language from the existing fuel cost rider. PREPA shall fix all these errors in the compliance filing and avoid exposing ratepayers to the costs of such avoidable errors.

IV. Subsidies

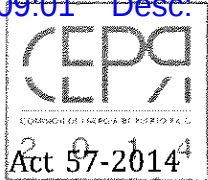
382. As just noted, PREPA has traditionally increased the FCA and PPCA by 12.36% (by placing 0.89 in the denominator) to recover certain subsidies. The levels of these expenses and discounts do not vary with fuel and purchased-power costs, so removing them from the fuel and purchased power adjustors and recovering them through a separate rider will better track costs. This change is also required by statute.

383. There remain two other decisions: (1) Which items will be included in the subsidies rider, vs. recovered through base rates? and (2) Will any customer classes be exempted from any of the subsidies?

384. The decisions for the Commission to make are relatively simple: Which items that PREPA calls "subsidies" shall be recovered through the special "subsidies" charge separately stated on customer bills, and which will be recovered through PREPA's base rates? As an aside, the recovery through base rates can occur in two different ways. One way is treat the item as an expense, then either state it separately as a distinct expense or include it in the A&G expense category. The other way is to treat the item as a reduction in revenues (which may be directly associated with the tariff class in which the customers receiving the revenues resides); then the lower level of adjusted revenues will increase the revenue deficiency and hence the required base-rate revenue increase.

385. Specifically, we find that the direct-debit credit is not a subsidy; it is a revenue reduction that PREPA justifies in terms of cost savings. Treating the \$129,428 (PREPA Schedule L-2) of the direct-debit credit as a reduction in PREPA's existing revenues rather than a subsidy increases the base revenue deficiency by \$129,428.²⁸⁴ On the other hand,

²⁸⁴ See Attachment 3, page 10.



regarding the \$5.8 million Energy Commission Assessment, Article 6.16(c) of Act 57-2014⁴ establishes that PREPA “will obtain the funds for the payments to the Commission from income derived from subsidies within its rate structure.” Accordingly, the \$5.8 million will be recovered through the subsidy rider.

386. The RFR fixed blocks are exempt from the subsidy charge, as well as from the CILT charge. However, Act 22-2016 requires any consumption in excess of the applicable fixed block of consumption be billed at the applicable rate for non-subsidized GRS customers, which includes the CILT and subsidies charges. PREPA also proposed to exempt LRS and RH3 customers from the subsidy charge, even though those customers currently pay for such charges through the fuel and purchased-power markups. While we are sympathetic to the particular financial conditions of LRS and RH3 customers, we find that PREPA has not properly justified exempting these customers from the subsidy charge, nor has it provided a rational for exempting these two groups of customers, but not other subsidized customer classes, such as, for example, customers on life-preserving equipment.

Directives

1. *Based on legislative mandates and our interpretation of the term “subsidy,” the following discounts and payments will be included in the subsidies charge:*

*Life-Preserving Equipment
RFR Tariff
LRS Tariff
RH3 Tariff
Residential Fuel Subsidy
Analog Rate
General Agricultural Service
Hotel 11% Discount
Rural Aqueducts on GRS
Downtown 10% Subsidy
Condo Common Areas
Act 73 Income Tax Credit
Public Lighting
Energy Commission Assessment
Irrigation District Deficit*

The FY2017 Subsidies amount shall be \$136,943,067.²⁸⁵

PREPA proposed including four other items in the subsidies charge. The Commission disagrees, as follows:

²⁸⁵ See Attachment 4, page 2 of 2.



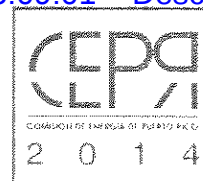
2. *The direct debit credit shall be removed from the subsidies ~~line item~~ because it will not be treated as a subsidy*
3. *The non-recovery of certain costs from net-metering customers is not viewed by the Commission as a "subsidy" and therefore will not be recovered through the subsidies charge. It is a reduction in revenue, like the direct debit credit.*
4. *The economic-development rider is not approved at this time. The Commission will discuss it further with participants in the upcoming rate design proceeding.*
5. *As for the load-retention rider, the Commission will address the appropriateness of including any resulting reduction in revenues in the subsidy charge if and when it approves specific applications.*

The following shall also apply:

6. *The only PREPA sales that will be exempt from the subsidy charge are the fixed blocks of the RFR tariff and some portions of the grandfathered net metering customers' consumption, as explain below. RFR customers shall pay the subsidy charge only for their consumption above their fixed-price consumption block.*
7. *The subsidies rider shall be reconciled annually.*
8. *Future negotiations between the Irrigation District and its non-agriculture customers shall involve ICPO to the extent ICPO wishes to participate. This requirement is not intended to exclude others.²⁸⁶*
9. *PREPA shall correct all erroneous language in the draft rider and submit the revised language to the Commission for approval.*

Attachment 4 to this Order contains a table which displays the Commission's decisions.

²⁸⁶ We require the negotiators to allow the participation of ICPO (if ICPO chooses to participate) because it is illogical to "negotiate" water rates to a level that is below PREPA's costs on the expectation that customers not present in these "negotiations" have to pay for the deficit. We are not giving ICPO a veto over the negotiations. We are saying that the Commission therefore will take seriously any ICPO objection to the outcome of those negotiations. Since ICPO's clients are both consumers of both water and electricity, ICPO will be in a good position to advise the Commission on the appropriateness of the outcome. The Commission has no objection to other customers participating in those negotiations. As PRASA says, all affected parties will be aware of the obligations and prices to be paid for the sale of water.



V. Net-Metering for distributed generation

A. Background

387. Distributed generation comprises small generation resources connected to the distribution system.²⁸⁷ Some of these facilities are free-standing facilities that sell power to the utility, but an increasing number of distributed generators throughout the developed world are located behind customers' meters, *i.e.*, on their premises. In Puerto Rico today, most of these customer-premises facilities are solar photovoltaic systems.

388. Act 114-2007 authorizes certain owners of distributed generation to engage in net-metering. The concept is that the energy produced by the facility reduces the customer's billing determinants (usually monthly metered energy, in kWhs). In many states' version of net-metering, when the facility produces more energy than the customer uses in a month, the excess energy is carried over as a credit against usage in future months. Each excess kWh is valued (*i.e.*, effectively compensated for) at the energy rate in the tariff under which the customer is served. Excess generation over the course of the year is often credited at a lower rate.²⁸⁸

389. Under Act 114-2007, net-metering is available to residential systems with capacity up to 25 kW, and non-residential systems with capacity up to one MW (1000 kW). The law allows for customer net excess generation to be carried over as a kWh to the following month, but the credit is limited to a daily maximum of 300 kWh for residential customers and 10 MWh for commercial customers.

390. PREPA proposes to increase the customer charge (which would not be reduced by net metering). We addressed that issue in Part Three-II above, rejecting the \$8.00 charge in favor of a customer charge at \$4.00. PREPA also proposes to charge net-metering customers for the CILT and Subsidy charges on both the energy provided by PREPA to the customer and the energy provided by the customer's generator to the customer; in other words, on the customer's full consumption.

391. Because the Commission will initiate a separate proceeding to examine rate design and net-metering, given the complexity of this rate case we address here a limited set of issues: treatment of credits, charges and exclusions for net-metering customers. As for all others raised by PREPA and intervenors, the statute does not require their resolution in this specific rate case; nor was there sufficient evidence or time to do so. We will address them in the upcoming rate design proceeding.

²⁸⁷ Sometimes, the term includes small units connected to the transmission system close to load.

²⁸⁸ The details in these arrangements vary among jurisdictions.



392. The remainder of this Part Three applies to renewable net-metering.

B. Credits and charges

393. Customers without generation behind the meter take all their energy from PREPA. The energy delivered to the customer from PREPA is defined as *inflow* in the Restructuring Order. As described in more detail below, we find that each net-metering customer should pay the same energy charges for inflow as other customers in its tariff class.

394. In addition, net-metering customers also provide energy to PREPA, which we termed *outflow* in the Restructuring Order. As described in more detail below, we find each grandfathered net-metering customer should be credited for outflow at the full energy charge applicable to its class, while a non-grandfathered net-metering customer should receive a somewhat lower credit, excluding certain non-by-passable charges.

395. Among the non-by-passable charges is the Transition Charge. The manner in which the Transition Charge is to be collected from all net-metering customers was decided and explained in the Transition Charge proceeding.²⁸⁹ Those dispositions remain unaltered.

396. Typically, a net-metering customer will experience outflow in some hours of a month, and inflow in other hours. It is our intention that each customer be billed monthly for the sum of the inflow over the metering intervals with net inflow, and be credited for the sum of the outflow over the metering intervals with net outflow.²⁹⁰

397. For *outflow* from ***non-grandfathered*** net-metering, the credit shall be the sum of the customer's base rate energy charge; the fuel charge; the purchased-power charge; and the subsidies for Hotel Discount, Downtown Commerce, Churches analog, rural aqueducts, GAS, Condominium Common Areas, and irrigation district; and the Act 73 Tax credit. These items are, or are akin, to normal utility costs (which net-metering customers are already allowed to avoid).

398. For *outflow* from ***non-grandfathered*** net-metering, the credit shall ***not*** include: CILT, the energy efficiency charge (when created), public lighting subsidy, the Energy Commission assessment, and all of the items denoted as "help to humans" during the technical hearing: life-preserving equipment, LRS Tariff, RH3 tariff, residential fuel subsidy,

²⁸⁹ See Restructuring Order, Docket No. CEPR-AP-2016-0001, June 21, 2016, at 71-84.

²⁹⁰ By "metering interval," we mean the time increments over which the meter records usage. Such interval shall not be less than 15 minutes and shall be an hour if that interval is possible with the available metering. We do not intend that PREPA replace meters that are capable of two-way hourly metering, if the primary purpose of such replacement is to reduce the time increment for net metering.



and the fixed public housing rate (RFR tariff). These items are mostly social commitments—4 things that benefit the public as a whole, including net-metering customers. As Mr. Chernick explained, net-metering customers are actual or potential beneficiaries of energy efficiency programs:

Energy-efficiency program costs are very different from the costs of traditional utility functions, in that a distributed generation customer can use energy efficiency services regardless of how much energy the customer takes from PREPA. While the power that flows out from the distributed generation customer to the delivery system can reduce PREPA's costs of generation, transmission and distribution, it does not affect the demand for energy efficiency services. Nor is the energy from distributed generation likely to reduce the extent to which a net-metering customer can participate in the energy-efficiency program.²⁹¹

399. For **outflow** from **grandfathered** net-metering, the credit shall be the sum of: Base Rate, fuel charge, purchased power charge, all items in the Subsidy Rider, CILT, and energy efficiency charge.

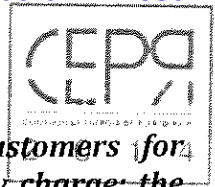
400. For **inflow**, each net-metering customer shall pay the full rate for its class, including the base rates, fuel charge, power purchase charge, CILT charge, full subsidy charge, and the energy efficiency charge.

401. There shall be no retail charge imposed on the energy that a net-metering customer receives from its renewable facility behind its meter (i.e. self-consumption). This result contrasts with the Transition Charge, which as explained in our Transition Charge Resolution, will be billed to each non-grandfathered net-metering customer based on the customer's total electric consumption, whether provided by PREPA or by its own generation.

C. Directives

1. ***PREPA shall charge net metering customers for inflow from PREPA's system at the normal rate for the tariff class.***
2. ***PREPA shall credit non-grandfathered net metering customers for outflow at the sum of the customer's base rate energy charge; the fuel rider; the purchased-power rider; and the portion of the subsidy charge that covers Hotel Discount, Downtown Commerce, Churches analog, rural aqueducts, GAS, Condominium Common Areas, and irrigation district; and the Act 73 Tax credit.***

²⁹¹ Chernick Report at 121.



3. *PREPA shall credit grandfathered net metering customers for outflow at the sum of the customer's base rate energy charge; the fuel rider; the purchased-power rider; the energy-efficiency cost adjustment; the CILT rider; and the subsidy rider.*
4. *All credits should be applied on each monthly billing cycle. For the billing cycle closing in June of each year, seventy-five percent (75%) of any excess kWh credit accumulated by the net-metering customer during the previous year and which remains unused, shall be purchased by PREPA based on the applicable outflow credit for each customer. The remaining twenty-five percent (25%) shall be assigned to PREPA to be distributed in accordance with Section 5 of Act 114-2007.*
5. *PREPA shall provide the Commission with a monthly report of net metering applications, and actual connections, by number and capacity, and by tariff class.*

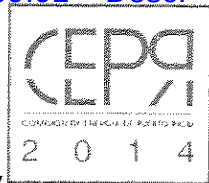
D. Exclusions

402. PREPA proposed to exclude the low-income classes from the net-metering option on the grounds they are already subsidized. This reasoning assumes that the net-metering benefit is technically a subsidy. We know that is the position of PREPA's consultant but the Commission has not reached that conclusion. Nor should anyone else, until we have a well-prepared marginal cost study and have thoroughly evaluated the benefits of renewable energy—an effort that only rudimentarily begun at the Technical Hearing. Moreover, there are already some net-metered LRS customers. Finally, under PREPA's proposal, a GRS customer who had net-metering but then suffered a financial reversal and thus ended up on the LRS tariff would lose his net-metering status. The Commission rejects PREPA's proposal to deny net-metering to low-income classes. Net-metering shall remain open to all customers with renewable generation.

E. Legal analysis regarding net-metering

403. In this section, the Commission provides the legal analysis that determines: (i) the treatment that would apply to grandfathered net metering customers; (ii) the treatment that would apply to non-grandfathered net-metering customers; and (iii) the requirements for determining whether applying a proposed charge to a net-metering customer is just and reasonable. Before making these determinations, we must first understand the original treatment received by net-metering customers under Act 114-2007,²⁹² and then the amendments to said Act introduced by Act 4-2016.

²⁹² An Act to order and authorize PREPA to establish a net-metering program, as amended, 22 L.P.R.A. §1011 *et seq.*



1. Original treatment of net-metering under Act 114-2007

404. Section 4 of Act 117-2007 originally forbade PREPA from imposing additional charges on net-metering customers or increasing their monthly consumption charges.²⁹³ Section 5 of Act 114-2007 established that, when a customer's inflow from PREPA was greater than the outflow from its generators, PREPA would charge that customer for the net inflow (i.e., the excess of inflow over outflow). As such, prior to Act 4-2016, net metering customers were subject to PREPA's regular rates, to be applied to their net inflow from PREPA (i.e., the total amount of energy provided by PREPA minus the total amount of energy supplied by the customer to PREPA's system). Under this treatment, net-metering customers paid PREPA's entire rate—which included CILT, subsidies and grants—on their net inflow.²⁹⁴

2. Amendments to Act 114-2007 made by Act 4-2016

405. Sections 29 and 30 of Act 4-2016 amended Sections 4 and 5, respectively, of Act 114-2007 to eliminate the prohibition against additional charges originally contained in Section 4 of Act 114-2007. These new sections introduced the test to be used by the Commission in evaluating any additional charge PREPA sought to impose on net-metering customers. Section 29 of Act 4-2016 also amended Section 4 of Act 114-2007 to provide a general exemption from additional charges (commonly referred to as the "grandfathering clause") to any customer who, by the date of approval of Act 4-2016: (i) has "entered into a net metering agreement"; or (ii) "is in the process of evaluating or developing a renewable energy project which shall be interconnected to the system of the Authority." The exemption also applies to a net-metering customer who, after the date of approval of Act 4-2016 but prior to the Commission approving such additional charges, submits a project for interconnection evaluation and complies with certain other requirements stated in the clause. Customers who comply with the aforementioned criteria are deemed to have been grandfathered, and therefore are exempt from payment of additional charges for a period of twenty (20) years from the date of approval of Act 4-2016.

²⁹³ This prohibition had a reasonable purpose: to protect net-metering customers from penalties that could be imposed by PREPA to compensate for reductions in revenues due to reduced sales or to dissuade customers from installing distributed generation systems. We do not interpret it, however, to mean that net-metering customers were entitled to avoid costs reasonably incurred by PREPA in providing services from which net-metering customers benefited in equal proportion to non-net-metering customers.

²⁹⁴ Prior to the approval of Act 57-2014, PREPA's costs were bundled together under general line items—for residential customers, mainly base rate. Customers also paid a separate fuel charge and power purchase charge. PREPA's new transparent bill (required by Section 6B of Act 83 and approved in Docket No. CEPR-AP-2016-0002) unbundles many of the costs and requires them to be separately stated. This requirement does not, however, mean that each new line item charge identified in the bill consists of a new charge not previously included in PREPA's rates.



406. Section 5 of Act 114-2007, as amended by Section 30 of Act 4-2016, provides⁴ that grandfathered net-metering customer shall be subject to the provisions of Section 5 as that section existed prior to its amendment (in essence, that net-metering customers would pay PREPA's rates on their net inflow only). Non-grandfathered net metering customers, on the other hand, must pay PREPA's normal rates on their net inflow, plus any additional charges approved by the Commission.²⁹⁵

3. Application of amended Act 114-2007 to grandfathered net-metering customers

407. Windmar, Sunnova and ICSE-PR argue that the grandfathering clause prevents PREPA from billing any charge approved by the Commission under Section 4 of Act 114-2007 to grandfathered net-metering customers.²⁹⁶ This argument is incorrect, because it exempts certain net-metering customers from paying for the types of costs they currently bear and had historically borne.

408. Both grandfathered net-metering customers and non-grandfathered net-metering customers currently pay PREPA's full rate (including costs such as CILT and subsidies, among others) on their net inflow (the excess of inflow over outflow). If grandfathered net-metering customers currently pay PREPA's full rate on their net inflow, then that is the treatment that the grandfathering clause seeks to continue after the approval of Act 4-2016 and this Order. Interpreting the grandfathering clause to prevent PREPA from collecting from grandfathered net-metering customers these types of charges—charges designed to recover costs embedded in the rates they currently pay (with the only difference being that those costs are now stated separately in PREPA's bills)—would mean granting those customers a different treatment than the one they had historically received under Act 114-2007.

409. The purpose of grandfathering is to maintain the *status quo*, not improve it.²⁹⁷ The Commission holds, as it previously did in the Restructuring Order,²⁹⁸ that there is no basis to inferring a legislative intent to exempt grandfathered net-metering customers from

²⁹⁵ See Section 5(b) of Act 114-2007, as amended by Act 4-2016 ("The Electric Power Authority may bill a customer for the net electricity supplied, as well as the charge to be approved by the Energy Commission in accordance with Section 4 of this Act").

²⁹⁶ See Windmar's Legal Brief at 7; Sunnova's Legal Brief at 7; See also ICSE-PR's Legal Brief at 15 ("ICSE adopts and endorses Windmar's Group legal position in question 25th to 33rd").

²⁹⁷ See Restructuring Order, Docket No. CEPR-AP-2016-0001 at 82, ¶ 319 (The legislative intent of grandfathering is "to ensure that those who made investments in reliance on the law as it existed before a statutory change are treated the same after the statutory change.")

²⁹⁸ See Part III.D.3.



all charges, including those charges which have always been included in PREPA's rates¹ and which are now being separately stated in each bill.

4. Application of amended Act 114-2007 to non-grandfathered net-metering customers

410. If grandfathered net-metering customers are responsible for paying charges approved under Section 4 of Act 114-2007 on their net inflow, then the Commission must conclude that non-grandfathered net-metering customers may be responsible for paying those same charges on their inflow (i.e., the total amount of energy supplied by PREPA to the customer without discounting the amount of energy supplied by the customer to PREPA's grid).²⁹⁹ Another way of stating it would be that charges approved by the Commission under Section 4 of Act 114-2007 are imposed on a non-grandfathered net-metering customer's inflow from PREPA without receiving a credit for such charges based on the customer's outflow.

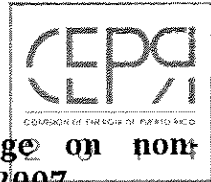
411. Some intervenors argue that charges approved pursuant to Section 4 of Act 114-2007 may be imposed only on the net inflow of non-grandfathered net-metering customers.³⁰⁰ We reject this interpretation as inconsistent with the legislative intent in amending Section 4 of Act 114-2007. In evaluating the applicability of the Transition Charge to non-grandfathered net-metering customers, we stated that "Act 114-2007 nowhere addresses, let alone authorizes, the unfair and destabilizing effect of allowing some customers to shift their costs to others."³⁰¹

412. Accordingly, the Commission holds that charges approved under Section 4 of Act 114-2007 may be imposed on a non-grandfathered net-metering customer's inflow from PREPA, without receiving a credit for such charges on their outflow.

²⁹⁹ A similar result would be reached if the Commission interpreted the phrase "additional charges" to mean charges which may be imposed on the inflow, as opposed to current charges which are imposed on the net inflow. An additional charge cannot be a charge to which a customer has always been responsible for paying. If the charge were applied to the *total* inflow (without receiving a credit for that charge based on the outflow), then the charge *would be* an "additional charge" with respect to the portion of the customer's consumption not previously used to determine a customer's bill.

³⁰⁰ See Windmar's Legal Brief at 7 and Sunnova's Legal Brief at 7.

³⁰¹ Restructuring Order at 76, ¶ 297. ACONER's legal brief recognizes the validity of the Commission's determination and that other intervenors agreed with such an interpretation during the Technical Hearing. See ACONER's Legal Brief at 5 ("Grandfathered" customers will pay the special charges for the net energy kWh consumed, while the "non-grandfathered" customers will pay on the total energy kWh consumption"). See also Technical Hearing Recording, at 3:43.



5. Requirements for evaluating a proposed charge on non-grandfathered customers under Section 4 of Act 114-2007

413. Having determined that PREPA may impose charges on the inflow of non-grandfathered net-metering customers, we must apply to the proposed charges the four standards stated in Section 4 of Act 114-2007. Specifically, the Commission must determine whether a particular charge (1) is "just"; (2) is related to the grid services received by net-metering customers; (3) is "excessive"; and (4) creates an obstacle to the development of renewable energy projects.

a. What is "just"?

414. The first criterion is whether the proposed charge is just. To determine how to apply this criterion, the Commission must first determine what is "just". Sunnova argues that there is no fixed result for "just and reasonable rates", but rather that it refers to a "zone of reasonableness" and that its purpose is "to protect consumers from unreasonable costs and prevent utilities from raising prices at will."³⁰² Other intervenors argue that the term "just" must be defined in the limited scope of Act 114-2007 and its applicability to net-metering customers. That is, that a decision to approve or not approve a charge on the inflow (without receiving a credit for that charge based on the outflow) of non-grandfathered net-metering customers need not result in just and reasonable rates for all other customers, if the result is "just" in the limited scope of net-metering customers.³⁰³

415. But the term "just" must be defined in the broader context of Act 57-2014. Said Act requires electric service rates to be "just and reasonable" for all customers. The evaluation of the applicability of a charge under Section 4 of Act 114-2007 is made within the context of a rate review procedure under Act 57-2014 and not within a separate procedure under Act 114-2007. As such, the term "just" applies to all customers, not only to net-metering customers.

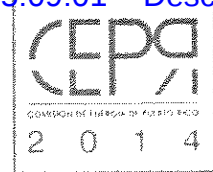
416. We reached a similar conclusion in our previous decision in the Restructuring Order. On that occasion, we stated that "justness to net-metering customers does not require making non-net-metering customers pay more so that net-metering customers can pay less."³⁰⁴ We further stated that "the term 'just' applies to all customers, not only net-metering customers" and that "to apply the term 'just' only to the net-metering customers would mean that the other customers are subject to some standards other than 'just', a result contrary to the tenets of Act 57-2014."³⁰⁵

³⁰² See Sunnova's Legal Brief at 3.

³⁰³ See Windmar's Legal Brief at 10.

³⁰⁴ Restructuring Order at 75, ¶ 292.

³⁰⁵ *Id.* at 75, ¶ 293.



417. The Commission cannot ignore the strong public policy in favor of the development of renewable energy generation, specifically distributed generation, and has taken affirmative steps in other proceedings, such as the IRP Order, to promote integration of renewable energy. However, the existence of said public policy does not override the statutory requirement imposed on the Commission that rates be just and reasonable for all customers. A charge which unduly shifts the burden from one customers to another, absent express legislative intent, such as in the case of a grandfathering clause, cannot result in "just and reasonable" rates.

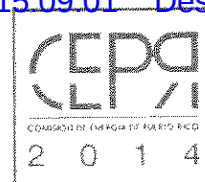
b. Costs related to grid services received by net-metering customers

418. The Commission must determine whether a charge is related to the grid services received by net-metering customers. We interpret this phrase to mean that net-metering customers should pay for the services they receive.

419. Act 114-2007 does not create a separate class of customers who are responsible only for a special, limited and differentiable portion of PREPA's costs. The difference between a regular customer and a net-metering customer is that net-metering customers are able to reduce their exposure to PREPA's costs by self-generating a portion of the energy they consume, and also to receive a credit for the energy they export to PREPA's grid. Neither Act 114-2007 nor the general public policy behind net-metering programs grants such customers the right to avoid costs merely by being net-metering customers.

420. If, for example, a net-metering customer decided to switch off her distributed generation system during any given period of time, that customer would be responsible for the entire costs incurred by PREPA (and paid for by non-net-metering customers), not just a portion of the costs assigned to net-metering customers. Charges which are borne by all of PREPA's customers, regardless of whether they are net-metering customers or not, should be paid for in equal proportion by all customers.

421. A coherent net-metering policy recognizes the benefits of net-metering and allows a customer to reduce its responsibility for costs directly associated with his or her consumption. PREPA's obligation to provide certain services, such as public lighting, will continue regardless of the number of net-metering customers. A customer's decision to net-meter does not reduce the benefits he or she receives from such services. Therefore, it would not be reasonable for non-grandfathered net-metering customers to avoid responsibility for costs which benefit them in equal proportion to non-net-metering customers, simply because they have a net-metering agreement.



c. What is "excessive"?

422. The third criterion the Commission must consider is whether a charge is excessive. We have previously defined the term as something that is beyond usual, proper, necessary, or normal.³⁰⁶ We have previously stated that "a charge is not 'excessive' if it does no more than recover costs legitimately applied to a customer."³⁰⁷ In other words, the Commission must determine whether a proposed charge (or the total amount thereof) would result in the customer paying beyond what is necessary to cover the costs incurred by PREPA in servicing that customer. A charge which recovers the proper share of costs from net-metering customers cannot be considered excessive, merely because it is inconvenient.

d. Obstacle to the development of renewable energy projects

423. The Commission addressed the meaning of "obstacle" in our Restructuring Order, at ¶¶ 295 and 296:

An "obstacle" is "something that impedes progress or achievement." One must understand the term "obstacle" in context. An obstacle is a change to what is normal—a barrier that impedes normal progress. It is a change to the status quo that makes progress more difficult than before. The Transition Charge reduces legacy costs. Requiring the customer to continue to bear those reduced costs is not an obstacle. The term "obstacle" cannot logically refer to the normal costs of interacting with society. That is all that the Transition Charge is: a means of recovering from all customers those costs legitimately and equitably allocated to all customers.

If the Commission were imposing on net-metering a new, unjustified cost, that would be an obstacle. The Transition Charge is not a new cost; it is a mechanism for reducing existing costs for which all customers, including net-metering customers, should be responsible. A charge that is the same for all customers cannot logically create an obstacle for net-metering customers. It takes nothing away from the good cause of renewable energy to reject this reasoning. (Citations omitted.)

424. This reasoning applies equally here. While the Transition Charge converted existing legacy cost into lower costs, the underlying costs at issue in that proceeding share an essential feature with the costs at issue in this proceeding: they are costs that are the responsibility of all customers. And so we conclude again: "A charge that is the same for all customers cannot logically create an obstacle for net-metering customers."

³⁰⁶ Restructuring Order at 76, ¶ 294.

³⁰⁷ *Id.*



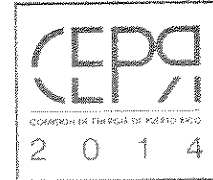
425. ACONER argued that any charge which increases the amount of time required for a customer to receive a return on her investment is an obstacle.³⁰⁸ Windmar argued that if a charge reduces the pace at which renewable energy is being integrated into PREPA's grid, then that charge would be an obstacle under Section 4 of Act 114-2007.³⁰⁹

426. The problem with these arguments is that, taken literally, they would treat *any* charge as an obstacle because any charge could decrease profitability or slow the pace of investment. Accepting these arguments would require us to eliminate all charges on net-metering—a result inconsistent with the legislative intent that we evaluate each of the four criteria separately.³¹⁰

³⁰⁸ See ACONER's Legal Brief at 8.

³⁰⁹ See *generally* Technical Hearing Panel I Part 2 Recording, 3:26:00.

³¹⁰ As part of the Directives listed in Part Three-V.C, the Commission is directing PREPA to provide monthly reports of net-metering applications and actual connections, which the Commission will use to, along with stakeholder participation, develop reliable and empirical metrics to asses and evaluate the impact of proposed charges on net-metering customers.



PART FOUR: Procedures for Establishing Revenue Requirements and Rates After FY2017

I. The goals: Disciplined spending, improved performance

427. Procedures for establishing revenue requirements and rates must serve multiple goals, including efficient performance by the utility; timely, predictable recovery of reasonable utility costs; transparency, to enable the rigorous oversight by the regulatory commission and consumer representatives; elimination of waste; and promotion of innovation.

428. If PREPA were an investor-owned utility, the Commission could induce efficient performance by making the utility shareholders absorb the costs of poor performance. But PREPA has no private shareholders to penalize if costs are excessive or performance suboptimal. Once PREPA incurs costs imprudently, the dollars are gone and the regulatory options diminish. If those imprudent costs are not paid for with dollars recovered from ratepayers, PREPA would have to divert funds from other purposes needed to serve ratepayers. PREPA and its ratepayers are a closed system.

429. The challenge, therefore, is to design procedures for financial discipline that, rather than blocking recovery of imprudent costs already incurred, instead prevent imprudent costs from being incurred. This Part Four examines options and establishes solutions. Part Four-II describes PREPA's proposed rate mechanism. Part Four-III presents the procedures we adopt for examining PREPA's budgets and setting its rates. Part Four-IV contains directives to PREPA.

II. PREPA's Proposed Rate Mechanism

430. PREPA proposed something called a Formula Rate Mechanism ("FRM"). As Commission consultant Woolf explained, the primary difference between FRM and traditional ratemaking is how each treats previously incurred costs. As explained in Part Two, a revenue requirement is based on projections of costs and sales. Under traditional ratemaking mechanisms, when results vary from projections the utility either under-collects (if actual costs exceed projections or actual sales fall below projections) or over-collects (if actual costs are less than projections or actual sales are more than projections). The typical FRM (including PREPA's proposed FRM) does things differently. At year end there is a "reconciliation" (also known as a "true-up"). If revenues are insufficient to cover actual costs, customers make up the difference. If revenues exceed actual costs, customers get a refund. If a utility tends to overspend its budgets, FRM shifts the financial burden to the customers.



431. PREPA's proposal, offered through its witness Dr. Hemphill, has six main elements:

432. **Three-year rate case:** A general rate case would occur every three years. As we have done in the present case, the Commission would (a) establish PREPA's revenue requirement based on then-current information, (b) allocate revenue responsibility based on a current cost-of-service study, and (c) design rates according to the Commission's then-current rate design goals.

433. **Interim rate cases:** In the years between the three-year rate cases, PREPA proposes to have annual proceedings to update the rates for the next year, to reflect new projections of costs and sales. In these interim cases, no changes to the revenue allocation or rate design would occur.

434. **Annual reconciliation:** In each rate case (whether three-year or interim), the Commission would reconcile the prior year's actual results to its projections, by refunding to ratepayers any over-collections and charging them for under-collections.

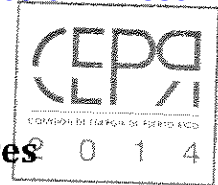
435. **Use of budgets:** PREPA proposes to use budget forecasts to set revenue requirements, in both the three-year and the interim rate cases. The budget forecasts would be divided by the sales forecasts to determine rates for the forthcoming year. (Dr. Hemphill did not address the fact that the timing of PREPA's budgeting does not synchronize with the timing of his proposed rate proceedings—a problem we solve in Part III below.)

436. **Other inputs to rate cases:** The information and findings from the most recent IRP proceeding will inform the capital expenditure forecasts in each three-year rate case and interim rate case.

437. **Adjudicated proceeding:** Each three-year rate case and interim rate case would involve an adjudicated proceeding.

Dr. Hemphill asserts that his six steps allow the Commission to protect customers from excess costs, because the Commission can "track PREPA's progress in meeting the goals set in each annual business plan."³¹¹ We are not convinced. His proposal is little more than a copy-paste of mainland U.S. investor-owned utility practices into Puerto Rico's uniquely difficult context. Without the major amendments we introduce next, his proposal is more likely to burden customers with PREPA's imprudent costs rather than to prevent PREPA from incurring imprudent costs.

³¹¹ Hemphill Additional Supplemental Testimony at 2, ll. 26-32.



III. Disciplining PREPA's spending: Four integrated procedures

438. Having considered the contributions of Dr. Hemphill, Mr. Woolf, and various intervenors, the Commission will adopt three distinct procedures, each designed to impose discipline on PREPA's spending. Those procedures are: (a) annual budget examinations starting with FY2019, (b) reconciliation procedures for each year's rates, and (c) a unique procedure for FY2018. After describing these procedures, we reference the upcoming performance proceeding. Over time, these four efforts will make PREPA's service worth the money customers pay.

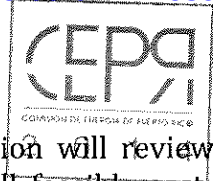
A. The annual budget examinations starting with FY2019

439. To ensure that PREPA's rates do not exceed its reasonable costs, the Commission will review PREPA's budgets and spending annually, using two different procedures.

440. One procedure will be the "*three-year rate case*." In this proceeding, the Commission will review PREPA's cost-reduction efforts, the physical condition of its system and its prior and prospective budgets for each major department. With that information, the Commission may establish a new revenue requirement, a new cost of service, a new revenue allocation and a new rate design. Based on those components, the Commission will establish prospective rates that reflect all feasible cost reduction efforts and thus recover, but do not exceed, the reasonable costs PREPA must incur to serve its customers reliably.

441. The other procedure will be a series of "*one-year budget examinations*" that occur between each three-year rate case. In these proceedings, the Commission will examine PREPA's proposed departmental budgets for the coming fiscal year, compare them to the prior year's budgets, then use that information to establish a just and reasonable revenue requirement for the fiscal year beginning on the upcoming July 1. The purpose of this procedure will be to update the prior year's revenue requirement. This updated revenue requirement will reflect (a) all feasible cost reductions that have been implemented in the prior year, along with those cost reductions that must be implemented in the next year; and (b) any known and measurable changes that we expect to occur in the upcoming fiscal year. As for revenue allocation and rate design, while time constraints will usually preclude changes in the one-year budget examinations, the Commission will adopt Mr. Woolf's recommendation to preserve its powers to make such changes prior to the next three-year rate case.

442. In each of these two types of procedures—the three-year rate case and the one-year budget examinations—changes to the rates will be prospective only. Contrary to PREPA's proposal made through Dr. Hemphill, PREPA **shall have no expectation of readily spending more than its approved revenue requirement, then simply charging ratepayers for the excess.** Nor will we repeat—ever again—the experience of this FY2017 rate proceeding, in which PREPA's consultants offered a revenue requirement having no



visible connection to actual department budgets.³¹² Rather, the Commission will review budgets in advance, adjust them to eliminate any waste and to require all feasible cost-savings opportunities, then set revenue requirements consistent with those modified budgets. PREPA's spending must adhere to those budgets.

443. Only in extraordinary situations, where PREPA proves it had no control of a cost increase (such proof to include testimony from those individuals responsible for the areas that experienced the cost increase), will the Commission permit after-the-fact recovery of costs not pre-approved by the Commission. In those instances, where PREPA does not provide proof or did have control of the over-runs, the Commission will decide the appropriate treatment based on the facts. This approach satisfies the needs of bondholders and of customers by providing discipline over PREPA's budgets and spending.

444. Of course, this approach of matching revenue requirements to budgets can work only if the budgets are reasonable, realistic and accurate. Budgets establish contexts. They prevent arbitrary decisions undisciplined by planning and priority-setting. PREPA therefore must prepare, in advance of each proceeding (whether three-year or one-year), a set of departmental budgets applicable to the upcoming fiscal year for which a new revenue requirement is sought. This set of departmental budgets, when totaled, shall be consistent with the proposed revenue requirement (recognizing that some costs, such as fuel, purchased power and CILT, will be reconciled as required by statute).

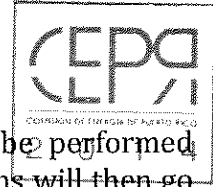
B. The reconciliation procedure and its effects on rate design

1. The procedure

445. After a fiscal year ends, some type of after-the-fact-reconciliation will be necessary because actual events will deviate from projections. Dr. Hemphill proposed to reconcile, for the immediately preceding fiscal year, the costs actually incurred and revenues actually received in that year with the costs and sales assumed by the Commission in establishing the revenue requirement for that year. But as just explained, the Commission will have capped spending at the budgeted levels. Therefore, the annual reconciliations will focus mostly on how actual sales varied from predictions, because those variances will have caused actual revenues to depart from projected revenues. We will make these reconciliation decisions within the one-year or three-year proceeding that immediately follows the year requiring reconciliation. We will call the procedure leading to the reconciliation decision the "reconciliation procedure."

446. We then have to put the reconciliation into effect. Putting the reconciliation into effect means modifying customer rates to correct any difference between the revenues PREPA actually received and the revenues PREPA was authorized to receive. We will put the reconciliation into effect beginning on July 1st of the new fiscal year following the year in which the calculation for the reconciliation was performed. Thus when FY2017 ends on June

³¹² As we explained throughout Part Two.



30, 2017, the calculations necessary to reconcile the FY2017 events will be performed sometime during FY2018, say by March 2018. Those reconciliation calculations will then go into effect starting in July 2018, *i.e.*, the beginning of FY2019.

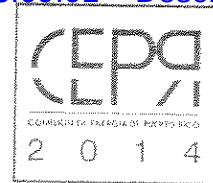
447. We reiterate: PREPA must have budgets, and it must live with those budgets. Any expectation PREPA has that it can readily spend above the revenue requirement in one year, then charge ratepayers for the difference in a later year, is emphatically rejected. The objective of all these proceedings is to cause PREPA to make realistic budgets, and then live within those budgets. Without this discipline, PREPA's budget overruns become its customers' budget burdens.

448. For our purpose to be achieved, the rate-setting procedure and the budget procedure must be synchronized. At present they are not. PREPA's witnesses testified that the current budgeting process aims to obtaining Board approval by the June preceding a new fiscal year. Budgets emerge from the departments and get approved by the Executive Director between March and April of the fiscal year prior to the one in which the budget will go into effect. To set revenue requirements in the preceding October, as Dr. Hemphill proposed, is to set revenue requirements without a budget. To set revenue requirements in the succeeding October would be setting them after the budget already has been approved and gone into effect—too late to prevent imprudent costs. By failing to synchronize budgets and revenue requirements, Dr. Hemphill's proposal fails in its putative purpose: to empower the Commission to discipline PREPA's spending.

449. Either the PREPA's budgeting process must occur earlier, or the Commission's revenue requirement procedure must occur later. Either way, **each proceeding must begin with a budget**. Rather than determine the specific dates in this Order, we will hold in the next few weeks a technical conference to develop with PREPA a procedure that achieves the necessary synchronization. That technical conference can be used to determine all of the dates and schedules about budgeting and reconciling, including the special reconciliation for FY2017 and the budgeting for FY2018 (as discussed in the next subsection).

450. To prevent any misunderstanding: The Commission is committed to creating a rate-setting process that provides PREPA the revenues it needs to operate efficiently and pay its bondholders timely. But the Commission is equally committed to fixing a situation in which budgets are disconnected from revenue requirements. PREPA's sponsorship of Dr. Hemphill's testimony did not help solve the problem. This Order does.³¹³

³¹³ Among Dr. Hemphill's FRM examples were ones used in Illinois and at the Federal Energy Regulatory Commission. These examples are not useful to the Commission. The Illinois statute applies to investor-owned utilities (which PREPA is not), and includes a penalty against their profits (which PREPA does not have). See Section 16-108.5(f-5) of the Illinois statute. The FERC method, like that of Illinois, applies to investor-owned utilities, not publicly-owned utilities. In at least one situation it has been criticized for limiting customers' opportunities to question the prudence of costs. See *Midwest Independent Transmission System Operator, et al.*, "Order on the Investigation of Formula Rate Protocols," Docket No. EL12-35-000, 143 FERC ¶ 61,149 (May 16, 2013).



2. The effects on rate design

451. Dr. Hemphill recommends that any reconciliation be implemented across-the-board through equal percentage adjustment in rates. Thus, each 1% decrease in the revenue requirement would cause a 1% decrease in all base rate charges (volumetric and non-volumetric).³¹⁴ Mr. Woolf disagreed. He recommended that customer charges and demand charges remain unchanged; reconciliations should be applied to only the volumetric energy charges.

452. We agree with Mr. Woolf. As his report explained, customer charges, when properly designed, include only costs that vary with the number of customers. Such costs typically include metering, billing and service drops. These costs do not change with the factors that usually affect reconciliations; specifically, changes in revenue requirements or in sales. The same reasoning applies to demand charges, which Mr. Woolf explained reflect the capacity costs of serving customers during peak periods. Like customer-specific costs, these capacity costs do not typically change due to changes in revenue requirements or sales.

453. To apply the reconciliation to fixed charges and demand charges, absent information demonstrating a change in those costs associated with the change in revenue requirements, would change the existing rate design rather than preserve it. While we will leave open an opportunity for PREPA to argue otherwise, the foregoing reasoning supports a rebuttable presumption against such argument. Only in rare situations would we expect the presumption to be rebutted.

C. The unique solution for FY2018

454. Assuming, hypothetically, that our new procedures began in early fall 2017, they would solve the problem for the fiscal year beginning July 1, 2018, *i.e.*, FY2019. We still need to address FY2018, which starts on July 1, 2017. For several reasons, FY2018 requires unique treatment. As of today, January 11, 2017, we do not know enough about FY2018 costs to determine the FY2018 revenue requirement, because our evidentiary hearing focused on FY2017.³¹⁵ In particular, we do not yet have a resolution of the bondholder negotiations—which will affect debt service costs and the debt service coverage ratio. We also have not made a final decision on AOGP. Those two matters alone could account for several hundred million dollars. Moreover, as already indicated, an October 2017 "one-year

³¹⁴ Hemphill Supplemental Direct Testimony at 6, ll. 109-112.

³¹⁵ Indeed, ¶ 74 of the Application initiating the current proceeding describes PREPA's revenue requirements panel (Pambush-Stathos-Porter) as presenting testimony that "addresses Fiscal Year 2014 (test year) costs and adjustments for known and measurable changes through FY2017.



budget examination" decision would be focusing on FY2019, not FY2018. Indeed, in Oct. 4 2017, FY2018 will already be three months old.

455. The logical solution—consistent with the above-stated principle that PREPA must live with its budgets rather than expect after-the-fact increases—is that any amendment to the approved FY2017 revenue requirement necessary to reflect FY2018 events shall be addressed in October 2017. At that point there will still be nine months remaining in FY2018. PREPA will have produced a FY2018 budget. In the October 2017 proceeding, therefore, the Commission will review that budget, require adjustments to reflect all prior and prospective cost savings, and establish an adjusted revenue requirement (and associated spending caps) for the remainder of FY2018. Any PREPA request beyond those approved in the October 2017 proceeding must be accompanied by clear showings of savings PREPA has produced through its internal restructuring efforts.

456. We emphasize that this October 2017 procedure to establish a revenue requirement for what remains of FY2018 is a one-time procedure necessary to smooth the transition toward the future of one-year budget examinations and three-year rate proceedings.

457. Furthermore, this one-time October 2017 proceeding would not be combined with a proceeding to determine the FY2019 revenue requirement. As emphasized above, we will not begin a proceeding on the FY2019 revenue requirement until we have from PREPA FY2019 departmental budgets. We will host a technical conference soon to determine a feasible schedule for that FY2019 proceeding, including dates for submission, interventions and evidentiary hearings.

D. The upcoming performance proceeding

458. On November 15, 2016, the Commission issued a Notice of Investigation to identify the needs and opportunities for improving PREPA's performance.³¹⁶ The investigation will include two tracks.

459. One track will include one or more independent audits of PREPA's performance. Another track will include a rulemaking process under which the Commission will prepare proposed rules to guide the Commission future oversight of PREPA's performance. Areas to cover could include PREPA's internal organization, executive and employee compensation, budgeting and spending, outsourcing of services where PREPA routinely under-performs, board governance, resource planning, operations, resource acquisition, visibility and transparency, and use of external experts.

³¹⁶ Puerto Rico Energy Commission, *Notice of Investigation to Identify Opportunities to Improve Performance of the Puerto Rico Electric Power Authority*, Case No: CEPR-IN-2016-0002, November 15, 2016.



460. The Commission will assess these options, all described in the² Smith-Dady report at Part VI: monthly surveillance reporting, performance auditing of major capital projects, and appointment of an independent management auditor for major capital projects.

461. A key tool for performance improvement is exposure. In the directives below including requiring PREPA to submit reports on cost overruns. The Commission will place such reports on its website and require PREPA to do so. The Commission will also transmit the report to entities with an interest in PREPA's operations and costs, including PREPA's Board, the Legislature, the Governor, the PROMESA Oversight Board, and, of course, PREPA's bondholders. These reports will serve three purposes. First, they will induce PREPA's executives, managers and employees to prevent unreasonable costs. Second, they will provide PREPA, the Commission and others with information, insights and recommendations. Third, they will enable public officials and investors to make informed decisions about PREPA and its future.

IV. Directives

- A. PREPA shall improve its bookkeeping, record keeping, and auditing practices so that PREPA management and the Commission have meaningful, timely, and reliable cost information.***
- B. PREPA shall submit an annual report comparing historical budget forecasts to actual expenditures, along with lessons learned for future forecasting purposes.***
- C. PREPA shall use the most recent, Commission-approved IRP as the basis for the budget forecast.***
- D. For any major new capital projects (to be defined by the Commission) included in a budget forecast, PREPA shall provide a third-party based estimate.***
- E. For each cost-overflow deemed unreasonable by the Commission, PREPA shall provide an analysis containing at least the following elements:***
 - 1. A summary of the process used by PREPA to forecast the budgets that were exceeded.***
 - 2. A summary of the actions PREPA took to contain expenditures within forecasted budgets.***
 - 3. A description of actions that PREPA will take to avoid budget overruns in the future.***



4. *A description of the departments within PREPA that are responsible for the budget forecasts and the operational and capital expenditures.*
5. *The names and positions of the PREPA executives and department heads that are responsible for the budget forecasts and the operational and capital expenditures*



PART FIVE: The Corporate Structure of PREPA

I. Description of PREPA Holdings, LLC

462. PREPA's enabling legislation authorizes it to create subsidiary corporations directly related to the "maximization of the Authority's electrical infrastructure." Specifically, PREPA may

create, in Puerto Rico or abroad, companies, entities, or subsidiary corporations, for profit or nonprofit, affiliated or associated, for purposes, among others, of developing, financing, building and operating industrial projects and other infrastructure directly related to the maximization of the Authority's electrical infrastructure, and acquiring, having and disposing of value and participation, contracts, bonds or other interests in other companies, entities or corporations, and exercising each and every power and right that such interest allows, provided that, in the Board's judgment, such act be necessary, appropriate or convenient to reach the Authority's purposes or to exercise its powers, and to sell, lease, grant or in any other way convey any property of such Authority or to delegate or transfer any of its rights, powers, functions or duties, to any of said companies, entities or corporations that are subject to its total or partial control, except the right to begin expropriation procedures. The above shall take place without detriment to the functions that other public corporations or government agencies of the Commonwealth of Puerto Rico currently have.³¹⁷

463. Under this authority, PREPA formed PREPA Holdings in 2009 as a wholly-owned subsidiary. PREPA Holdings is a limited liability company which in turn owns three other subsidiaries. PREPA has described these entities as follows:

1. PREPA Networks, LLC invests, develops, finances, constructs and operates new generation fiber optics for PREPA within and outside Puerto Rico. The Company provides wholesale telecommunications services and markets the excess communications capacity of PREPA's fiber optic cable system.
2. Consolidated Telecom of Puerto Rico, LLC invests, develops, finances, constructs and operates new generation fiber optics for PREPA. This company also provides enterprise (retail) telecommunications services.

³¹⁷ 22 L.P.R.A. sec. 196 (v).



3. InterAmerican Energy Sources, LLC invests, develops, finances, constructs¹ and operates renewable and non-renewable energy power projects and other electric utility services and infrastructure, such as but not limited to the generation, purchase, sale and distribution of photovoltaic solar-thermal, wind, waste-to-energy, oil, gas and petroleum distillates within and outside the Commonwealth of Puerto Rico in connection with the operation of PREPA.

464. PREPA Holdings has no operations of its own. It is the sole owner of PREPA Networks and InterAmerican Energy Sources. Consolidated Telecom of Puerto Rico is a subsidiary of PREPA Networks. PREPA Networks has a 51% membership (ownership) interest in Consolidated Telecom; PREPA Holdings has the remaining 49% membership interest.³¹⁸ PREPA Networks has 50 employees; its subsidiary, Consolidated Telecom, has 8 employees. InterAmerican Energy Sources has no employees and is not currently operating.³¹⁹ The three subsidiaries of PREPA Holdings are housed outside of PREPA (*i.e.*, not in buildings owned or occupied by PREPA).

465. Relative to PREPA, PREPA Holdings is very small. Its consolidated assets total approximately \$53 million, only 0.5% of the total asset value of its parent. The three subsidiaries in 2014 had a positive net position of about \$20 million.³²⁰

II. Benefits and risks of the current corporate structure

466. When a monopoly utility has affiliates, concerns arise in the following categories: effects on the utility's finances, effects on the utility's customers, and effects on the utility's competitors.

A. Finances

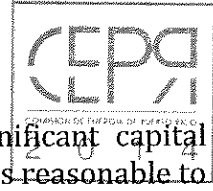
467. According to Commission Consultant Hill, a limited liability company structure implies that the debts undertaken by the subsidiary are non-recourse to the parent companies (PREPA Holdings and, ultimately, PREPA). Under that structure, debt issued by each PREPA Holdings subsidiary should be secured by that subsidiary's assets and income stream, not by the assets or income stream of the parent.

468. Because of the subsidiaries' small size relative to PREPA, their effects (positive or negative) on PREPA's financial condition will be infinitesimal—provided the subsidiaries remain at their present size. If, however, any one of those companies undertakes a

³¹⁸ SGH-02-08 (g)(iii) at 56. Commission's Fourth Request of Information (July 15, 2016).

³¹⁹ SGH-01-38 (f) at 42. Commission's Second Request of Information (June 23, 2016).

³²⁰ PREPA's 2014 Annual Report at 36 (PREPA Ex. I-2).



substantial expansion or a large construction project and requires a significant capital infusion, the risk of financial harm to PREPA rises. Mr. Hill asserted that it was reasonable to assume that in the event of any significant debt issuance by a subsidiary of PREPA Holdings and a subsequent business failure of that subsidiary, the lenders would seek recourse from PREPA regardless of their non-recourse position.

469. On the benefit side, Mr. Ramos, PREPA's Chief Financial Officer ("CFO") asserted that when PREPA contracts with the subsidiaries, it benefits from their PREPA experience. He added that because those vendors are wholly-owned by PREPA, their earnings stay within the PREPA family.³²¹

B. Customers and competitors

470. Whenever a monopoly company affiliates with a competitive company there is a risk of cross-subsidies. In the context of an inter-affiliate transaction, a cross-subsidy occurs when the price paid by the affiliate for the utility's service is below market price, or the price paid by the utility for the affiliate's service is higher than the utility's own cost or the market price. Cross-subsidies can also arise from resource transfers, such as if assets, personnel or technology is developed by the utility (or affiliate) and transferred to the affiliate (or utility) at less (or more) than market value (or cost, whichever is the relevant benchmark). Also, in the utility ratemaking process the affiliate's overhead is over-allocated to the utility or the utility's overhead is under-allocated to the affiliate, ratepayers subsidize competitive affiliates—to their own detriment and to the detriment of the utility's unaffiliated competitors.

471. Mr. Hill identified several examples. He said that the prices PREPA Networks was paying PREPA for capacity on PREPA's fiber optic cable might be lower than market prices, at least for urban areas, thus disadvantaging PREPA's customers as well as unaffiliated competitors of PREPA Networks. He also pointed out that PREPA paid PREPA Networks approximately \$500,000 for 60 mobile radios (July 2015), without evidence of competitive bidding.

472. PREPA witnesses claimed that pricing in the inter-affiliate transactions was benchmarked against competitive prices. But those prices could have been different had there been transparent, head-to-head competition to provide the services at issue.

473. Mr. Ramos argued that doing business with PREPA Networks benefits PREPA because its affiliate is familiar with PREPA's needs. But that argument ignores the fact that other companies, if given the chance, could develop the same familiarity. It is especially

³²¹ Response to SGH-03-02 at 16. Commission's Eight Request of Information (August 19, 2016).



concerning that, as we learned at the technical hearing, PREPA has no "code of conduct" rules for inter-affiliate interactions that prevent consumer harm and unearned competitive advantage. Such codes are standard fare in other jurisdictions.

474. The Commission also learned that InterAmerican intends to develop and finance energy power sources related to solar and other green energy generation methods. Its affiliation with PREPA, the primary energy provider in Puerto Rico, would give it name recognition—a competitive advantage not attributable to InterAmerican's merits. Puerto Rico needs to focus on attracting renewable energy competitors. Allowing entry by an affiliate of a monopoly utility does not help that cause.

C. The underwater transmission cable

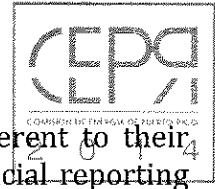
475. InterAmerican Energy presented another complication. In 2015 it was planning to develop and own an underwater transmission cable to interconnect the electric power systems on the islands of Puerto Rico and St. Thomas, U.S. Virgin Islands.³²² In its submission to FERC, InterAmerican stated that either InterAmerican or PREPA would provide transmission service over the line and that, initially, power would flow from Puerto Rico to St. Thomas from an interconnection at PREPA's Fajardo Substation.

476. It is odd that in the middle of its financial crisis, PREPA would consider investing in an expensive and risky project, one requiring hundreds of millions of dollars in capital that PREPA itself cannot raise. The venture raises all the classic problems: the risk of angry investors seeking recourse to PREPA if the project fails, the risk of PREPA's customers being charged for the venture's costs while not being compensated for the benefits PREPA provides, and the risk that PREPA's preferred relationship with InterAmerican would deter others from competing for this opportunity. However, as PREPA's witnesses made clear at the technical hearing, this project is going nowhere. Nevertheless, PREPA needs to focus on its customers and leave such ventures to entities that could be in a better position to undertake this type of projects.

III. Open questions

477. Mr. Ramos has asserted that each subsidiary operates independently of the others and of PREPA. This assertion is not consistent with the facts. Each subsidiary has business relationships with PREPA that cannot be described as arms-length because they did not arise from competitive bidding, and are not disciplined by a code of conduct or by any regulatory review. The telecom entities lease fiber capacity from PREPA, PREPA uses their services, and PREPA provides construction services to them. The Executive Director of

³²² The basic facts are in InterAmerican's 2015 filing before the Federal Energy Regulatory Commission (FERC) in Docket No. EL15-24-000. See FERC Order Granting Petition for Declaratory Order (Feb. 15, 2015).



PREPA sits on the Board of some of the subsidiaries. He cannot be indifferent to their performance. Indeed, PREPA Holdings is consolidated with PREPA for financial reporting purposes. Based on these facts, the claim of "independence" is not credible.

478. What is missing is transparency: the Commission's ability to see the details of the operations and cash flows of the subsidiaries, including how those operations and cash flows affect PREPA, its customers and competitors. Mr. Hill explained that his "[r]epeated attempts [...] to obtain basic annual financial information regarding the subsidiaries of PREPA Holdings (income statements, balance sheets, cash flow statements) [...] were unsuccessful."³²³ PREPA did supply consolidated financial data for one year and some data regarding charges to PREPA by the PREPA Holdings companies, but it never supplied annual historical financial data for each of the subsidiaries of PREPA Holdings as requested.³²⁴

479. Mr. Ramos asserted that PREPA has no control of the income statements, cash flow statements, and balance sheets of any of the PREPA Holdings subsidiaries.³²⁵ This statement is not credible. PREPA is the sole shareholder of the company that owns these companies. PREPA has control. It has the power to direct its subsidiaries to take the actions PREPA wants—or not to.

480. Mr. Ramos acknowledged that "[i]t is difficult to quantify the added value PREPA receives from its subsidiaries [...]"³²⁶ Given that fact, we wonder why it is necessary to subject PREPA, its customers and its competitors to the afore-described risks. This rate case, with its focus on a \$3.5 billion revenue requirement, is not the ideal place to assess fully the costs and benefits of PREPA Holdings. The upcoming performance investigation is. There the Commission will assess the benefits and detriments to Puerto Rico of having its distressed utility involved in businesses that have little to do with PREPA's service obligations. Until we conduct that analysis, PREPA and its affiliates shall comply with the directives described next.

IV. Directives

- A. *PREPA shall provide annually, consistent with a schedule to be determined by the Commission, (a) access to all operating and financial records of each***

³²³ Hill Report at 47.

³²⁴ CEPR-SGH-01-038 at 42. Commission's Second Request of Information (June 23, 2016), CEPR-SGH-02-08 at 56. Commission's Fourth Request of Information (July 15, 2016) and CEPR-SGH-03-01 through 06. Commission's Eight Request of Information (August 19, 2016).

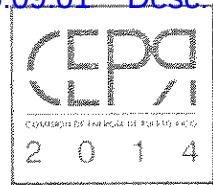
³²⁵ Response to SGH-03-01 at 3. Commission's Eight Request of Information (August 19, 2016).

³²⁶ PREPA Response to CEPR-SGH-03-02 at 16. Commission's Eight Request of Information (August 19, 2016)



of PREPA Holdings' subsidiaries; and (b) a list and description of all inter-affiliate transactions to which PREPA is a party.

- B. PREPA shall create no new direct or indirect affiliates, nor inject further equity into or loan further money to, any direct or indirect affiliate, without informing the Commission at least 30 days before such action is to be taken. Such request for permission shall include a business plan, and financial and economic analyses demonstrating how the new business will bring benefits to Puerto Rico without causing harm to consumers or competition.*
- C. PREPA shall propose to the Commission a code of conduct that ensures, to the extent feasible, that affiliate relationships cause PREPA's customers no extra cost and cause PREPA's competitors no unfair disadvantage. Such code of conduct shall reflect the "state of the art" in protecting customers and competitors from harm.*
- D. Under no circumstances shall PREPA (a) guarantee any debt of the subsidiaries, (b) allow its assets or revenue to become security for any debt incurred by the subsidiaries, or (c) in any way become financially responsible for any commitments undertaken by the subsidiaries.*
- E. Until further notice, PREPA shall provide no resources or assistance to, or receive resources or assistance from, any affiliate whose business activities include competing to provide renewable energy facilities. PREPA shall disclose all such resources or assistance that have been provided to date.*



Findings of Fact³²⁷

Part Two – The FY2017 Revenue Requirement

1. The FY2014 data for the test year was "stale" and "unrepresentative" of the costs underlying a FY2017 revenue requirement.
2. The problems with the data were inevitable given the multi-year gap between the FY2014 audited results and the FY2017 rate year.
3. PREPA's consultants used a test year of FY2014, because it was the most recent 12 months for which audited information was available.
4. PREPA's financial condition is not stable.
5. Because PREPA's weak financial condition, lenders are not willing to make long-term loans.
6. The only source of funds for PREPA, for long-term capital expenditures, are today's customers.
7. In each major area of PREPA's budgets dropped from FY2010 to 2016, and especially sharply between FY2014 and FY2015.
8. Non-labor spending on every area, except A&G, has declined by 28% since FY2010.
9. Beginning in FY2014 PREPA has been underspending its already-reduced budgets.
10. PREPA's operational spending has been based not on actual needs but on overall ceilings rooted in political concerns about rate increases.
11. The effects of T&D work force reduction have been significant on transmission and distribution system maintenance. These effects have been exacerbated by a shortage of funds necessary to execute a well-planned preventative maintenance program.
12. Work force reduction has caused the reassignment of multiple construction crews to focus on reactive maintenance instead of preventative maintenance and new construction causing, a steady decline in transmission and distribution system maintenance and performance across key performance indicators including CAIDI since 2014.

³²⁷ The Findings of Fact listed in this section have the purpose of summarizing many of the findings made by the Commission in support of its determinations in this Final Resolution and Order. It is not intended to be a complete or exhaustive list of all the findings made in this Final Resolution and Order.

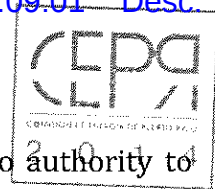


13. PREPA's spending on Administrative and General operations has been increasing.
14. PREPA's spending last year on miscellaneous A&G related expenses was more than its entire proposed budget for generation expenses in FY2017.
15. Instead of allocating dollars according to the activities and costs of each area, PREPA's consultants simply allocated to each area that percentage of the proposed FY2017 total that matched its fraction of the FY2014 total.
16. PREPA's consultants acknowledged that their method may not relate in any way to PREPA's actual budgeting process.
17. PREPA does in fact have a bottom-up, by-directorate operations expense budget for FY2017, independent of its by-area allocation of operational expenses in the revenue requirement. PREPA did not disclose this budget to the Commission or its consultants prior to the Technical Hearing.
18. The by-area operations expense allocations proposed by PREPA are disconnected from PREPA's actual operations budget.
19. PREPA routinely reallocates funds during the year depending on changing circumstances.
20. PREPA's performance improvement initiatives are in many cases still experimental in nature.
21. PREPA is having difficulty managing its workforce.
22. PREPA is an inefficient bureaucracy with high absenteeism, has an unacceptable safety record, is overly staffed with non-value-added administrative personnel, especially in the executive directorate, and has an oversized executive team.
23. PREPA has a shortage of technical expertise.
24. PREPA has been incurring hundreds of thousands of dollars in fines for environmental non-compliance.
25. PREPA pays for the energy AES produces and the dependable capacity it provides. PREPA also compensates AES for its startup-related costs after any unit shutdown requested by PREPA.
26. PREPA's energy payment to AES has two components: a fuel pass-through, and a charge for variable operations and maintenance costs. The per-kWh energy price is fixed every year, subject to a guarantee from PREPA that the unit will be dispatched at



a capacity factor of at least 50%. The capacity price reflects AES's capitals costs and its fixed operations and maintenance costs.

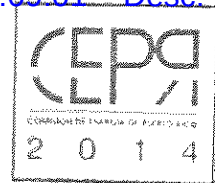
27. PREPA's contract with EcoEléctrica includes a capacity payment and a base energy charge. PREPA pays charges for unit start-up if PREPA requested the preceding shut-down. The EcoEléctrica contract also requires an "excess energy payment" for energy required above a 76% capacity factor. These factors make it difficult for PREPA to predict its payments to EcoEléctrica.
28. In recent years, PREPA has based its capital budget on a compromise between the system's actual needs and a desire to avoid any rate increase.
29. There has been no base rate increase since 1989.
30. PREPA needs to improve its budgeting process.
31. The information provided by PREPA as part of its responses to requests for information was often insufficient.
32. PREPA could not provide sufficient documentation explaining a project, justifying its expense, how the estimate was generated, or even the project's value to customers.
33. PREPA's largest units are not reliable.
34. PREPA's total anticipated spending at the Aguirre Steam Units, averaging \$16/kW from 2017-2019, are in line with "run-rate" capital dollars budgeted for steam coal units at other utilities.
35. PREPA did not provide forced outage records or estimates for the Aguirre Combined Cycle units.
36. The Alstom contract should be treated as operations and maintenance (O&M) expense rather than a capital cost.
37. PREPA's goals in pursuing smart-grid technology are similar to those of other utilities installing smart grid.
38. With regards to using PREPA Network, PREPA should have used competitive bidding to select the best provider.
39. The Irrigation District arrangement is inefficient and illogical.
40. PREPA's contractual obligation to pay the interest and principal due on the legacy debt remains.



41. While the Commission has authority to approve future debt, it has no authority to adjust the outcome of the PREPA-bondholder negotiations.
42. PREPA's forecast for FY2017 was acceptable.
43. PREPA and its bondholders should not eliminate the role of Consulting Engineer.

Part Three – Revenue Allocation and Rate Design

1. Because PREPA does not have a continuing load-research program, it had to develop load shapes through other means.
2. PREPA did not have information with which to determine various customer classes' contribution to system peak load.
3. PREPA used allocators based on estimates of class non-coincident peak load.
4. PREPA did not have non-coincident peak data for each customer class for any recent year, so it combined data on load shapes from as early as FY2009 and as late as FY 2014, depending on the tariff code.
5. PREPA's estimates of class demand allocators do not represent the load characteristics that drive PREPA's costs.
6. PREPA's proposed revenue allocation deviates markedly from its COSS.
7. PREPA's marginal cost study is deficient.
8. The fixed customer charge for the GRS class proposed by PREPA is overstated
9. A \$4.00 customer charge is justified by marginal cost considerations.
10. PREPA's marginal cost study had estimates of marginal energy costs that were lower than PREPA's self-reported FY2016 production costs.
11. PREPA's estimates reflected fuel costs much lower than those estimated by Drs. Fisher and Horowitz.
12. PREPA's estimates did not account for the fact, for plants which are operating all month, the costs necessary to raise those plants' production would be lower than normal.
13. PREPA used an average of the hourly marginal costs, rather than a weighted average of hourly prices reflecting the higher marginal costs in higher-load hours.
14. PREPA's fuel discount is overly complicated and needs to be simplified.



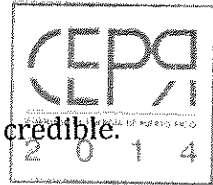
15. PREPA currently recovers all of its fuel costs and purchased-power costs through separate but similar Fuel Cost Adjustment (FCA) and Purchased-Power Cost Adjustment (PPCA) cost riders. Most other costs are recovered through base rates.
16. CILT and subsidies are currently recovered through the FCA and PPCA by means of a "gross-up" produced by dividing the adjustment revenues by 0.89 (which is equivalent to adding about 12.36% to fuel and purchased-power costs).
17. The levels of subsidies related expenses and discounts do not vary with fuel and purchased-power costs.

Part Four – Procedures for Establishing Revenue Requirements After FY2017

1. The Commission must design a procedure for financial discipline that, rather than blocking recovery of imprudent costs already incurred, instead prevent imprudent costs from being incurred.
2. PREPA proposed something called a Formula Rate Mechanism (FRM).
3. The primary difference between FRM and traditional ratemaking is how each treats previously incurred costs. If revenues are insufficient to cover actual costs, customer make up the difference. If revenues exceed actual costs, customers get a refund.
4. PREPA's proposal is more likely to burden customers with PREPA's imprudent costs rather than prevent PREPA from incurring imprudent costs.
5. After a fiscal year ends, some type of after-the-fact-reconciliation will be necessary because actual events will deviate from projections.
6. PREPA's rate-setting procedure and its budgeting procedures are not synchronized.
7. The Commission lacks sufficient information to set a revenue requirement for FY2018.

Part Five – The Corporate Structure of PREPA

1. PREPA has no "code of conduct"—rules for inter-affiliate interactions that prevent consumer harm and unearned competitive advantage.
2. Each subsidiary has business relationships with PREPA that cannot be described as arms-length because they did not arise from competitive bidding, and are not disciplined by a code of conduct or by any regulatory review.
3. PREPA Holdings is consolidated with PREPA for financial reporting purposes.



4. The claim of "independence" between PREPA and its subsidiaries is not credible.
5. PREPA is the sole shareholder of the company that owns these subsidiaries. PREPA has control. It has the power to direct its subsidiaries to take the actions PREPA wants—or not to.

* * *



Conclusions of Law³²⁸

1. Act 57-2014 established procedures and standards for evaluating and establishing electric rates to be charged by PREPA.
2. The Commission is the entity created by Act 57-2014 to regulate and oversee PREPA's operations and performance and review its rates.
3. Act 57-2014 grants the Commission ample discretion in adopting the necessary determinations to ensure a safe and reliable electric service at reasonable prices.
4. Section 6.25(a) requires PREPA's rate to be "just and reasonable and consistent with sound fiscal and operational practices which result in a reliable service at the lowest reasonable cost."
5. The Commission approved Regulation 8720, establishing the information requirements with which PREPA must comply when it submits an application for new rates.
6. Section 6.25(d) of Act 57-2014 grants the Commission discretion to, within 30 days from the date on which a petition for new rates is filed, approve a Provisional Rate.
7. Section 6.25(f) requires the Commission to complete its review of PREPA's proposed rates within 180 days from the date PREPA's request is deemed to be complete.
8. If the Commission fails to make a final determination within said 180 days, the rate proposed by PREPA is deemed approved as a matter of law.
9. Act 57-2014 requires PREPA's rates must: (i) "[be] sufficient to guarantee payment of principal, interest, reserves, and all other requirements of bonds and other financial obligations that have not been defeased as part of the securitization provided in Chapter IV of the Electric Power Authority Revitalization Act, and reasonable costs of providing the services of the Authority; (ii) complies with the terms and provisions of the agreements entered into with or in benefit of buyers or holders of any bonds or other financial obligations of the Authority; (iii) covers the costs of the contribution in lieu of taxes and other contributions and subsidies required to the Authority under special laws; (iv) remains in effect during three (3)- year cycles at least, except for periodic adjustments authorized by the Commission as part of the rate approved, and unless the Commission *motu proprio* decides to conduct a review; (v) takes into

³²⁸ The Conclusion of Law listed in this section have the purpose of summarizing many of the findings made by the Commission in support of its determinations in this Final Resolution and Order. It is not intended to be a complete or exhaustive list of all conclusions reached in this Final Resolution and Order.



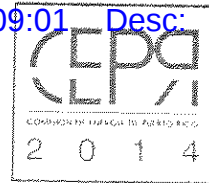
consideration the operational and administrative efficiencies and savings provided in the Creditors' Agreement as reasonably."

10. The revenue requirement, and the rates approved to recover such revenue requirement, approved in this Final Resolution and Order complies with the requirements set forth in Act 57-2014.
11. Act 57-2014 does not give the Commission discretion to judge the reasonableness of the CILT and subsidies.
12. PREPA's enabling legislation authorizes it to create subsidiary corporations directly related to the "maximization of the Authority's electrical infrastructure.
13. The Commission has the statutory authority to require PREPA to provide information regarding its subsidiaries.
14. A central principle of just and reasonable ratemaking, economic efficiency and equity is that costs should be borne by those who cause them.
15. A cost-of-service study does not place a constraint on the Commission's discretion in allocating revenue responsibility.
16. Act 57-2014 provides that the FCA and PPCA rides may "only include costs directly related to the purchase of fuel and energy."
17. Act 22-2016 grants certain low-income customers a fixed electric service rate for a specified block of energy consumption.
18. Grandfathered net-metering customers shall pay charges approved under Section 4 of Act 114-2007 on their net inflow (after receiving a credit for their outflow).
19. Non-grandfathered net-metering customer shall pay charges approved under Act 114-2007 based on their total inflow from PREPA.
20. The charges approved in this Final Resolution and Order under Section 4 of Act 114-2007 are just, are designed to recover costs related to grid services received by net-metering customers, are not excessive and do not represent an obstacle to the development of renewable energy projects.
21. Act 50-2013 does not constrain the Commission's discretion is approving rate applicable to the Puerto Rico Aqueduct and Sewer Authority.
22. The Commission is not required, either by Act 57-2014 or by the Restructuring Support Agreement, to approve the Formula Rate Mechanism proposed by PREPA in its filing.



23. Act 57-2014 does not require the Commission to approve a customer-specific mechanism for calculating the amount to be credited or charges to PREPA's customers to reconcile the Provisional Rate with the permanent rates approved.

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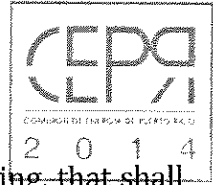


List of Commission Directives

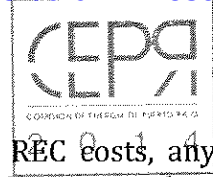
1. PREPA shall use the Modified DSCR ratemaking model for purposes of determining PREPA's base rate revenue requirement. This requirement shall apply for FY2017, and for future fiscal years until the Commission finds that PREPA has access to external debt financing on reasonable terms. Once PREPA has regained access to the capital markets on reasonable terms, the Commission will require PREPA to use the DSCR-based ratemaking methodology, under which capital expenditures incurred in a particular year are recovered ratably over the life of the equipment or asset funded by those expenditures.
2. While using the Modified DSCR approach, PREPA shall account for the ratepayer funding of PREPA's capital expenditures as contribution in aid of construction.
3. Operating and maintenance (O&M) expenses include standard repairs and maintenance required to keep an asset in operational condition. These types of repairs shall be accounted for in the period incurred—i.e., expensed in a maintenance category. This category shall include repairs that may last more than a year, but shorter than a full maintenance cycle.
4. PREPA has not properly maintained its generation facilities in FY2015 or FY2016. PREPA shall increase its FY2017 Generation Expense of \$9.680 million for Labor and \$4.495 for non-Labor, for a total FY2017 Generation Expense increase of \$14.175 million.
5. PREPA shall reclassify the contracts listed in Attachment 3, page 2-3, totaling \$16 million from Capital Expenditure to Generation Expense.
6. PREPA has not properly maintained its transmission facilities in FY2015 or FY2016. PREPA shall increase its FY2017 Transmission Expense of \$3.330 million for Labor and \$479,000 for non-Labor, for a total FY2017 Transmission Expense increase of \$3.809 million.
7. PREPA has not properly maintained its distribution facilities. PREPA shall increase its FY2017 Distribution Expense by \$16.115 million for Labor and \$2.372 million for non-Labor, for a total FY2017 Distribution Expense increase of \$18.487 million.
8. There shall be no change to PREPA's proposed FY2017 customer service amount.
9. The revenue requirement for bad debt expense shall be \$97.384 million, resulting from multiplying PREPA's estimated uncollectibles rate of 2.97% by the full amount of PREPA's proposed expenses (as adjusted by the Commission).
10. PREPA shall decrease A&G labor expense by \$17.057 million.



11. PREPA shall develop and submit to the Commission a revised monthly report format, providing for greater detail on PREPA's operational budgets, organized by functional area.
12. PREPA shall provide detailed information on the spending within the "miscellaneous" non-labor segment of the Administrative and General functional area. Such information shall distinguish between funds spent to date and funds not yet spent.
13. PREPA shall account for fines and penalties in the proper account; specifically, FERC account 426.3.
14. PREPA shall verify that it has not included in its proposed revenue requirement any amounts for fines and penalties.
15. PREPA shall submit to the Commission a full explanation of the causes of fines and penalties from FY2013 to the present, including the names and titles of specific individuals whose actions or inactions contributed to the violations that triggered the penalties.
16. If PREPA incurs fines and penalties for FY2017 or future years, it shall explain to the Commission the nature of these costs and the specific individuals responsible for the actions or inactions causing the fines or penalties. PREPA also shall submit to the Commission a plan for complying with all rules so as to avoid future fines and penalties.
17. PREPA shall continue its policy, per the Consent Decree discussed in its FY2014 audited financial statement, of paying the stipulated penalty in advance to benefit from a 50% discount.
18. PREPA shall provide updates concerning the appraised value of PREPA's unused property (i.e., property not needed to provide utility service), as well as PREPA's plans for maximizing the value of such properties.
19. PREPA shall adjust its monthly report format to list monthly and year-to-date actual spending and budgeted values by labor and non-labor expenses in the same functional areas used herein. These reports shall include the total annual budgets and percent of budgets spent in the past month and year-to-date.
20. PREPA shall prepare a report, to be submitted with its next rate case filing, regarding its use (or lack thereof) of the additional \$19.4 million of operational expenses allowed by the Commission (per Attachment 3, page 6) and the effect of that spending on its system.
21. PREPA shall continue to record its monthly operations spending by directorate. When PREPA reallocates funds between directorates, it shall memorialize and justify such reallocations in written form.

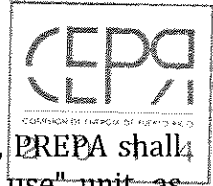


22. PREPA shall prepare a report, to be submitted with its next rate case filing, that shall include its as-approved internal operations expense budget by directorate, its actual monthly operations spending by directorate, and a listing of these memorialized reallocations and the justifications thereof.
23. PREPA shall increase its FY2017 fuels budget (and its revenue requirement) by \$461,305,000, for a total FY2017 fuel budget of \$1,117,273,000.
24. As presented in its filing on Schedule A-6, PREPA proposed to include the following costs in the Fuel Adjustor: fuels (residual, distillate, natural gas, propane, additives), transportation, inspection, laboratories, storage, handling, delay, taxes, and hedging. PREPA has not incurred Fuel Expense for Additives in the last three fiscal years through FY2016. Nor has it incurred expense for Delays or Fuel Hedging in the last two fiscal years (FY2015 and FY2016). Before incurring such costs in the future, PREPA shall submit to the Commission a request for approval, containing the proposed amount and a justification, and await approval. All other categories of Fuel Expense proposed by PREPA shall be included in its revenue requirement.
25. In the upcoming performance proceeding, the Commission will require PREPA to recommend to the Commission at least three firms to conduct a management performance review specifically relating to fuel purchase costs. These firms may be the same firms recommended for the purchased power review discussed below. The Commission will select one firm, which shall contract with PREPA to conduct the review under specifications established by the Commission. Such review shall contain, without limitation, a recommendation regarding procedures for periodic audits of PREPA's fuel procurement, to ensure that such costs are reasonable and accounted for properly.
26. PREPA shall prepare fuel price forecasts at least semi-annually, submit them to the Commission and post them on its web site.
27. There are no adjustments to PREPA's projected FY2017 Purchased Power Expense.
28. In the upcoming performance proceeding, the Commission will require PREPA to recommend to the Commission at least three firms to conduct a management performance review specifically relating to purchased power. These firms may be the same firms recommended for the fuel cost review. The Commission will select one firm, which shall contract with PREPA to conduct the review under specifications established by the Commission. Such review shall contain, without limitation, a recommendation regarding procedures for periodic audits of PREPA's power purchases, to ensure that such costs are reasonable and accounted for properly.
29. Consistent with the requirement in our IRP Order, PREPA shall establish and update semiannually a database of its renewable energy contracts, for all projects whether or not operational. This database shall include the names, owners, contract numbers,



initial energy costs, current energy costs, initial REC costs, current REC costs, any relevant escalators, and expected and actual on-line dates. The format used in response to CEPR-AH-03-02 is acceptable but not binding.

30. The FY2017 revenue requirement shall include the full proposed capital spending at Aguirre, Costa Sur 5 & 6, Palo Seco, and San Juan Steam Plants, as well as the \$600,000 FY2017 improvements at Mayagüez.
31. PREPA shall remove the maintenance contract at San Juan CC from the capital budget and reassigned it as an annual maintenance expense, a reassignment of \$12 million in FY2017 from capital to O&M. PREPA shall remove the cost of the Cambalache maintenance contract from the capital budget and reassign it as an annual maintenance expense—a reassignment of \$4 million in FY2017 from capital to O&M. Attachment 1 shows increased PREPA's Generation Expense by \$16 million, as discussed above.
32. PREPA shall track capital expenses associated with each generating unit designated as "limited use." Such tracking shall be performed for each individual unit. To the extent capital expenditures at a plant site are not separable by unit, PREPA shall associate those expenditures in the tracking record by the units that benefit from the capital or, if applicable, designate an expenditure as "whole plant." In addition to, or as part of this tracking, PREPA shall:
 - a. submit periodic reports on capital projects at Palo Seco 1 & 2, regardless of whether these units are designated "limited use."
 - b. submit periodic reports on capital projects at San Juan 7-10, regardless of whether these units are deemed "limited use."
 - c. submit periodic reports on capital projects at Costa Sur 3 & 4, regardless of whether these units are deemed "limited use."
33. PREPA shall submit strategic plans for the San Juan and Palo Seco steam plants, including the following elements, at a minimum: maintenance plan, MATS compliance plan, and an investment plan for maintaining or retiring San Juan 7-10 and Palo Seco 1 & 2. These plans shall be informed by a reliability study, assessing what strains are placed on the generation and transmission system in the presence or absence of the San Juan or the Palo Seco steam units.
34. PREPA's long-term modeling, including for integrated resource planning, shall consistently assess whether each generating unit designated as "limited use" is available for reliability purposes; and if not, assess the value of maintaining units that neither contribute to peak purposes nor provide energy to the system.



35. In its next submission within the integrated resource planning process, PREPA shall assess the economic value to ratepayers of maintaining each "limited use" unit, as compared to retiring such unit.
36. In the upcoming performance proceeding, the Commission shall consider whether to require PREPA submit to the Commission at least three qualified consultants, one of which the Commission will select and retain, to:
- a. examine the maintenance contract at San Juan combined cycle plants and the performance of MHPS-PR to determine if the contractor is meeting performance expectations for maintenance service.
 - b. examine the Cambalache contract and the performance of Alstom to determine if the contractor is meeting performance expectations for maintenance service at Cambalache.
37. PREPA shall submit for Commission approval, prior to its execution, any long-term contract with service providers with a potential net present value of \$25 million or higher.
38. PREPA shall submit a summary of the expenditures necessitated by the fire and outage occurring in September 2016.
39. Consistent with the IRP Order, PREPA shall limit spending on AOGP to \$15 million, reducing FY2017 revenue requirements by \$41,340,000.
40. PREPA shall not sign a Limited Notice to Proceed or a Final Notice to Proceed at AOGP until it has submitted, and the Commission has approved, the AOGP Economic Analysis; or until the Commission resolves the Reconsideration under review. PREPA shall make no other commitments to incur future costs relating to AOGP without submitting a request and documentation to the Commission. If the Commission approves AOGP, PREPA may request an increase in the revenue requirement.
41. The Commission recognizes, as the Fisher-Horowitz Report says, that "[s]talling projects, cancelling vendors, or missing contractual deadlines could result in increased costs, damages, or potential legal actions by vendors." PREPA shall alert the Commission promptly—and factually—if such possibilities become imminent realities.
42. If and when PREPA needs to incur additional costs for "alternative investments" (i.e., alternatives to AOGP), it shall first seek and obtain Commission approval.
43. Based on the information provided by PREPA and its examination and assessment in the Fisher-Horowitz Report, as well as the discussion at the technical hearing, the Commission approves the full FY2017 transmission system capital budget as requested by PREPA.



44. The Commission approves the full FY2017 distribution system capital budget as requested by PREPA. PREPA shall continue acquiring advanced meter reading ("AMR") meters unless a specific application requires advanced meter infrastructure ("AMI"). If PREPA wishes to acquire smart meters above the 30,000 already acquired without a specific technical application need, it shall submit a detailed business case describing and evaluating the costs and benefits of smart meter deployment. The business case should provide detail of the scope, scale and schedule of deployment, including but not limited to technological and financial issues. It should take into account the need for staff and consumer education for effective meter use.
45. PREPA should not commit to any greater expenditure than what is approved here, without approval of the Commission.
46. For future purchases of meters, PREPA shall use competitive bidding.
47. PREPA shall provide to the Commission a report describing its efforts to bill and collect from municipalities in regard to the consumption of electricity at for-profit businesses affiliated with such municipalities.
48. PREPA shall include in its FY2017 revenue requirement \$314 million for debt service principal and interest.
49. PREPA shall include a debt service coverage amount of approximately \$126 million, reflecting a debt service coverage ratio of 1.40 applied to the \$314 million in debt service.
50. PREPA shall inform the Commission monthly on its progress regarding financial restructuring, including its efforts to obtain an investment grade credit rating for the new debt to be issued by PREPARC, and its meetings with members of the PROMESA Oversight Board. PREPA shall submit to the Commission copies of any formal presentations that it (or PREPARC) makes to credit rating agencies or to the PROMESA Oversight Board.
51. PREPA shall use all reasonable efforts to persuade the PROMESA Oversight Board to provide the maximum debt service relief available, including demonstrating to that Board how the savings will benefit the Commonwealth's economy and its electricity consumers.
52. PREPA shall reflect a FY2017 amount of \$38.925 million in Other Income.
53. In future years, PREPA shall detail the basis for amounts included as Other Income.
54. PREPA shall develop a single, reliable, theoretically sound forecasting model for each rate class. Each model should be able to predict adequately historical sales.

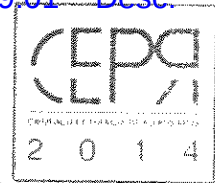


55. PREPA shall develop a new sales forecast based on these models prior to submitting to the Commission another planning or rate case.
56. Any changes to PREPA's forecasting models in the future shall be clearly documented and supported by evidence.
57. In submissions relating to forecasts, PREPA shall provide clear, comprehensive, and accurate methodological documentation, including work-papers showing all relevant inputs and calculations, along with note sources for all assumptions and hard-coded values.
58. All forecasts shall explicitly account for energy efficiency, demand management and demand elasticity, by class and on a total system basis.
59. As part of its compliance filing, PREPA shall submit no later than February 15, 2017 for Commission review and approval, the computation and description of the actual permanent rate increase for each tariff code and the language it will include in each customer's bill explaining the increase.
60. As provided in Section 6A(f) of Act 83, PREPA's permanent rates shall enter into effect 60 days from the date of approval of this Final Resolution and Order.
61. The reconciliation of provisional rates with permanent rates shall commence when the permanent rates are in effect.
62. The reconciliation shall occur over the same amount of months that the provisional rates were in effect.
63. The reconciliation shall apply to the broad customer classes identified in Part Three-I.A., rather than on a customer-specific basis. This approach will save the \$130,000 per month that PREPA has estimated would be required to reconcile per-customer.
64. Because of the small size of the difference between the provisional rates and the permanent rates, the reconciliation shall be done by adjusting the per-kWh charge, rather than by adjusting each element of a customer class's rate structure.
65. As part of its compliance filing, PREPA shall provide, no later than February 15, 2017, the following information: (i) the total amount (in dollars) to be credit to customers, (ii) the allocation among customer classes of the total amount to be credited, and (iii) the amount (in cents/kWh) to be credited to each customer class on every billing cycle.
66. PREPA shall take necessary steps to assure that its audited financial statements can be completed and made available on a timely basis.

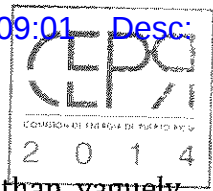


67. PREPA shall submit to the Commission its Monthly Reports to the Governing Board. 4
In addition, the report to the Commission will include the following:

- a. explain significant variances between (i) budgeted and actual data, and (ii) current and prior year data.
 - b. provide information on Labor Costs, including how current month and year-to-date payroll, pensions, OPEBs and other employee benefit costs compare with prior year amounts and current year budgets.
 - c. provide information on PREPA's actual debt service coverage ratio.
 - d. provide information on the status of PREPA's financial restructuring, including significant events that have occurred during the reporting month.
68. PREPA shall allocate budgets for new initiatives and costs to specific functional areas, according to standards to be determined by the Commission.
69. As required by the Trust Indenture, PREPA shall retain a Consulting Engineer, different from the one previously engaged. Before recruiting the Consulting Engineer, PREPA shall submit to the Commission a description of the duties and the required qualifications. The Commission may comment on such description, but PREPA shall have full discretion to choose the Consulting Engineer. PREPA shall provide the Commission any information it requires about the functions, activities and reports of the Consulting Engineer.
70. PREPA shall allocate the allowed revenue increase in an equal cent-per-kWh basis with one exception.
71. Prior to computing the general cent-per-kWh increase referenced above, PREPA shall increase the PPBB revenue requirement by the average increase in the system revenue requirement, excluding the fuel, purchased-power and Transition Charge.
72. The remainder of the allowed revenue increase shall be divided by projected non-PPBB FY2017 sales to yield a general cent-per-kWh revenue increase rate.
73. The revenue allocation for each tariff shall be increased by the revenue increase rate times the projected sales for that tariff.
74. The fixed charge for non-subsidized GRS customers shall be raised to \$4.00, which is consistent with Mr. Chernick's recommendations. No other fixed charge shall be changed. The remainder of the revenue allocated to the GRS customers will therefore be recovered through the consumption (per kWh) charge. By making the decision to consume electricity more expensive, this approach will encourage more energy conservation and more renewable energy.



75. The Commission accepts Mr. Chernick's reasoning and his conclusion. PREPA shall maintain the existing cents/kWh differential in the GRS inclining block rate.
76. PREPA shall restructure the fuel discount for customers on the LRS, RH3 and GRS 111 tariffs, simplified as proposed in PREPA's filing, but modified so that the discount diminishes gradually over 425 kWh, rather than abruptly. The fuel discount shall be phased out from 425 kWh to 500 kWh.
77. The direct-debit discount shall remain as currently established, i.e., as a 10% discount on base rates, excluding all riders.
78. In the rate design proceeding, PREPA shall present a business case that describes the benefits and costs of this discount.
79. PREPA shall add the description of the direct debit discount to its tariff book.
80. PREPA shall not increase demand charges for any tariff other than PPBB (as described herein). The revenue increases assigned in this proceeding to the other tariffs with demand charges shall be recovered through PREPA's proposed customer charges and through increases in the per-kWh rates.
81. PREPA shall increase each component of the PPBB tariff by an equal percentage, computed to recover the revenue increase allocated to this class consistent with the Commission's determination above.
82. PREPA shall eliminate the ratchets and contract demands. They are unnecessarily complex and lacking in cost justification. With these changes, the demand-charge portion of the customer's bill shall be determined solely by the current month's 15-minute maximum demand.
83. This labor-intensive, deadline-driven rate case is a suboptimal time to make major changes in rate design, especially where the effects of those changes on various customers is not well-understood. PREPA shall retain Tariffs TOU-P and TOU-T without change in availability, and keep them open for new customers. PREPA shall eliminate the ratchets and contract charges from these tariffs, and increase the on-and off-peak energy charges in each tariff uniformly to recover the allocated revenue increase. We will address the issue of time-of-use rates in the upcoming rate design proceeding.
84. PREPA shall not initiate the economic development rate. The Commission does not currently have expertise in job development. The proposal does not address, among other things, the types of jobs or their longevity. Nor does the proposal address the Commission's ability to enforce the job creation requirement against a customer that fails to achieve that requirement. This Commission cares deeply about economic development, and will do all it can within its authority to stimulate it. But decisions of



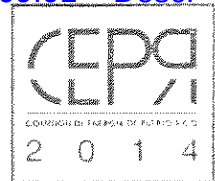
this importance to Puerto Rico's future must be supported by more than vaguely defined riders. We will discuss this option more deeply in the upcoming rate design proceeding.

85. PREPA shall institute a tariff offering load-retention discounts where necessary to retain load. The discounts shall be subject to Commission advance review, not produce rates below marginal cost, shall be no greater than necessary, shall not encourage wasteful consumption, and shall not pose an obstacle to the development of economical renewable energy.
86. Negotiations between PREPA and customers seeking this discount shall (a) be guided by the foregoing principles and any others the Commission establishes, and (b) include representatives of ICPO to the extent ICPO wishes to participate. This requirement is not intended to exclude others.
87. PREPA shall increase each component of the public lighting and unmetered tariffs by an equal percentage, computed to recover the revenue increase allocated to this class consistent with the Commission's determination above. We will revisit these issues in the rate-design proceeding.
88. PREPA shall raise each reconnection charge to its cost level: \$50 for secondary customers and \$500 for primary customers, adjusting its revenue requirement accordingly. This change aligns the charge with PREPA's estimates of actual cost. Any future changes in fee schedules require Commission approval.
89. All fuel and purchased-power costs shall be collected through the riders, zero through base rates.
90. The riders shall be updated quarterly. PREPA shall include an acceleration provision that is triggered upon a finding by the Commission that the combined difference between projected costs and projected revenues for the FCA, PPCA and the energy-efficiency adjustment in the current quarter exceeds \$20 million.
91. PREPA shall correct all erroneous language in the draft riders and submit the revised language to the Commission for approval.
92. The Contribution in Lieu of Taxes (CILT) shall no longer be collected by PREPA via the 0.89 factor that had been in the denominator of its Fuel and Purchased Power Adjustors. Rather, CILT will be collected through a separate rider. The FY2017 CILT amount shall be \$51,783,821.
93. Customers in the RFR class shall be exempt from the CILT as applied to the fixed block consumption charge, but shall pay CILT for consumption exceeding the fixed block.
94. PREPA shall correct the erroneous language in the draft rider and submit the revised language to the Commission for approval.



customers' consumption, as explain below. RFR customers shall pay the subsidy charge only for their consumption above their fixed-price consumption block.

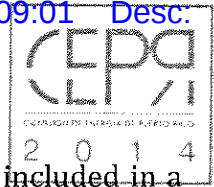
104. The subsidies rider shall be reconciled annually.
105. Future negotiations between the Irrigation District and its non-agriculture customers shall involve ICPO to the extent ICPO wishes to participate. This requirement is not intended to exclude others.
106. PREPA shall correct all erroneous language in the draft rider and submit the revised language to the Commission for approval.
107. PREPA shall charge net metering customers for inflow from PREPA's system at the normal rate for the tariff class.
108. PREPA shall credit non-grandfathered net metering customers for outflow at the sum of the customer's base rate energy charge; the fuel rider; the purchased-power rider; and the portion of the subsidy charge that covers Hotel Discount, Downtown Commerce, Churches analog, rural aqueducts, GAS, Condominium Common Areas, and irrigation district; and the Act 73 Tax credit.
109. PREPA shall credit grandfathered net metering customers for outflow at the sum of the customer's base rate energy charge; the fuel rider; the purchased-power rider; the energy-efficiency cost adjustment; the CILT rider; and the subsidy rider.
110. All credits should be applied on each monthly billing cycle. For the billing cycle closing in June of each year, seventy-five percent (75%) of any excess kWh credit accumulated by the net-metering customer during the previous year and which remains unused, shall be purchased by PREPA based on the applicable outflow credit for each customer. The remaining twenty-five percent (25%) shall be assigned to PREPA to be distributed in accordance with Section 5 of Act 114-2007.
111. PREPA shall provide the Commission with a monthly report of net metering applications, and actual connections, by number and capacity, and by tariff class.
112. PREPA shall improve its bookkeeping, record keeping, and auditing practices so that PREPA management and the Commission have meaningful, timely, and reliable cost information.
113. PREPA shall submit an annual report comparing historical budget forecasts to actual expenditures, along with lessons learned for future forecasting purposes.
114. PREPA shall use the most recent, Commission-approved IRP as the basis for the budget forecast.



95. Reconciliation of the CILT rider shall occur annually with each budget examination or three-year rate case filing, whichever applies.
96. The Commission will address the details of this rider when it determines energy efficiency programs, providers and budgets. For now, PREPA shall revise the rider to correct drafting errors and to provide for annual adjustment and reconciliation.
97. Based on legislative mandates and our interpretation of the term "subsidy," the following discounts and payments will be included in the subsidies charge:

- Life-Preserving Equipment
- RFR Tariff
- LRS Tariff
- RH3 Tariff
- Residential Fuel Subsidy
- Analog Rate
- General Agricultural Service
- Hotel 11% Discount
- Rural Aqueducts on GRS
- Downtown 10% Subsidy
- Condo Common Areas
- Act 73 Income Tax Credit
- Public Lighting
- Energy Commission Assessment
- Irrigation District Deficit

98. The FY2017 Subsidies amount shall be \$136,943,067.
99. The direct debit credit shall be removed from the subsidies line item because it will not be treated as a subsidy.
100. The non-recovery of certain costs from net-metering customers is not viewed by the Commission as a "subsidy" and therefore will not be recovered through the subsidies charge. It is a reduction in revenue, like the direct debit credit.
101. The economic-development rider is not approved at this time. The Commission will discuss it further with participants in the upcoming rate design proceeding.
102. As for the load-retention rider, the Commission will address the appropriateness of including any resulting reduction in revenues in the subsidy charge if and when it approves specific applications.
103. The only PREPA sales that will be exempt from the subsidy charge are the fixed blocks of the RFR tariff and some portions of the grandfathered net metering



115. For any major new capital projects (to be defined by the Commission) included in a budget forecast, PREPA shall provide a third-party based estimate.

For each cost-overrun deemed unreasonable by the Commission, PREPA shall provide an analysis containing at least the following elements:

1. A summary of the process used by PREPA to forecast the budgets that were exceeded.
 2. A summary of the actions PREPA took to contain expenditures within forecasted budgets.
 3. A description of actions that PREPA will take to avoid budget over-runs in the future.
 4. A description of the departments within PREPA that are responsible for the budget forecasts and the operational and capital expenditures.
 5. The names and positions of the PREPA executives and department heads that are responsible for the budget forecasts and the operational and capital expenditures.
116. PREPA shall provide annually, consistent with a schedule to be determined by the Commission, (a) access to all operating and financial records of each of PREPA Holdings' subsidiaries; and (b) a list and description of all inter-affiliate transactions to which PREPA is a party.
117. PREPA shall create no new direct or indirect affiliates, nor inject further equity into or loan further money to, any direct or indirect affiliate, without informing the Commission at least 30 days before such action is to be taken. Such request for permission shall include a business plan, and financial and economic analyses demonstrating how the new business will bring benefits to Puerto Rico without causing harm to consumers or competition.
118. PREPA shall propose to the Commission a code of conduct that ensures, to the extent feasible, that affiliate relationships cause PREPA's customers no extra cost and cause PREPA's competitors no unfair disadvantage. Such code of conduct shall reflect the "state of the art" in protecting customers and competitors from harm.
119. Under no circumstances shall PREPA (a) guarantee any debt of the subsidiaries, (b) allow its assets or revenue to become security for any debt incurred by the subsidiaries, or (c) in any way become financially responsible for any commitments undertaken by the subsidiaries.
120. Until further notice, PREPA shall provide no resources or assistance to, or receive resources or assistance from, any affiliate whose business activities include



competing to provide renewable energy facilities. PREPA shall disclose ~~all such~~
resources or assistance that have been provided to date

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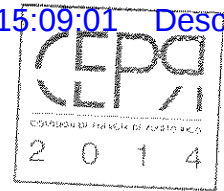


Any party adversely affected by this Final Resolution and Order may file a motion for reconsideration before the Commission, pursuant to Section 11.01 of Regulation 8543 and the applicable provisions of Act No. 170 of August 12, 1988, as amended, known as the Uniform Administrative Procedure Act ("LPAU", for its Spanish acronym). Said motion must be filed within twenty (20) days from the date in which copy of this Final Resolution and Order is notified and such notice is filed in the case docket by the Commission's Clerk. Any motion for reconsideration must be filed at the Commission Clerk's Office, located at the Lobby of 268 Muñoz Rivera Ave., San Juan, PR 00918. Copy of the motion as filed must be sent by email to all the parties notified of this Final Resolution and Order within the twenty (20) days established herein.

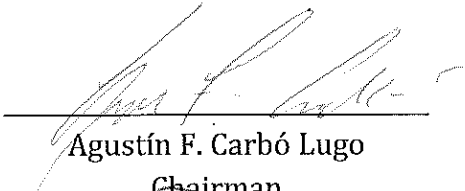
The Commission shall have fifteen (15) days from the date in which such motion is filed to consider it. If the Commission rejects it forthright or fails to consider it within said period of fifteen (15) days, the term to seek judicial review shall begin on the date in which the Commission notifies its rejection or the date in which said fifteen (15) days expire, whichever occurs first. If the Commission considers the motion, the term to seek judicial review shall commence from the date a copy of the notice of the Commission's resolution definitively resolving the motion for reconsideration is notified and copy of such notice is filed by the Commission Clerk. The Commission shall have ninety (90) days from the date the motion for reconsideration was filed to issue a final determination. If the Commission considers the motion for reconsideration but fails to take any action with respect to such motion within ninety (90) days of its filing, it shall lose jurisdiction and the term to seek judicial review shall commence upon the expiration of said ninety (90) day term, unless the Commission, for just cause and within those ninety (90) days, extends the term to resolve for a period that shall not exceed thirty (30) days.

In the alternative, any affected party may file a petition for review before the Court of Appeals within a term of thirty (30) days from the date a copy of the notice of this Final Resolution and Order was notified and copy of such notice was filed by the Commission's Clerk. Filing and notice of a petition for review before the Court of Appeals shall be made pursuant to the applicable provisions of Regulation 8543, the LPAU and the Rules of the Puerto Rico Court of Appeals.

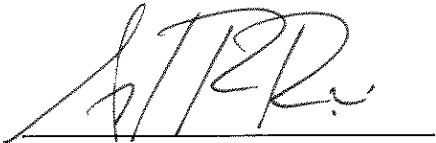
Given its complex and technical nature, the Commission publishes this Final Resolution and Order in English. However, for the benefit of all parties involved, the Commission will provide a Spanish translation approximately 30 days from today. Should any conflict between each version arise, the English version shall prevail.

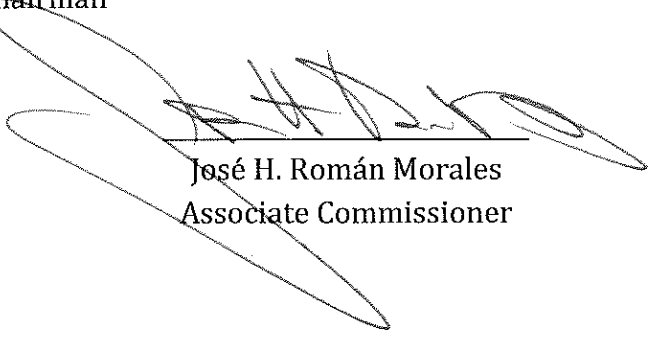


Be it notified and published.


Agustín F. Carbó Lugo

Chairman


Ángel R. Rivera de la Cruz
Associate Commissioner


José H. Román Morales
Associate Commissioner

CERTIFICATION

I hereby certify that the majority of the members of the Puerto Rico Energy Commission has so agreed on January 10, 2017 and on this date a copy of this Final Resolution and Order was notified by electronic mail to the following: n-ayala@aeep.com, c-aquino@aeep.com, glenn.rippinge@r3law.com, michael.guerra@r3law.com, john.ratnaswamy@r3Law.com, codiot@opic.pr.gov, jperez@oipc.pr.gov, mmuntanerlaw@gmail.com, jfeliciano@constructorespr.net, abogados@fuerteslaw.com, jose.maeso@aae.pr.gov, edwin.quinones@aae.pr.gov, nydinmarie.watlington@cemex.com, aconer.pr@gmail.com, epenenergypr@gmail.com, jorgehernandez@escopr.net, ecandelaria@camarapr.net, pga@caribe.net, manuelgabrielfernandez@gmail.com, agraitfe@agraitlawpr.com, maribel.cruz@acueductospr.com, mgrpcorp@gmail.com, eirizarry@ccdlawpr.com and pnieves@vnblegal.com, attystgo@yahoo.com. I also certify that today, January 10, 2017, I have proceeded with the filing of the Resolution issued by the Puerto Rico Energy Commission and I have sent a true and exact copy to the following:

Puerto Rico Electric Power Authority

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Lcda. Coral M. Odio Rivera
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Sunnova Energy Corporation

p/c Vidal, Nieves & Bauzá, LLC
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San Juan, Puerto Rico 00920

Cámara de Comercio de Puerto Rico
p/c Eunice S. Candelaria De Jesús
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San Juan, Puerto Rico 00902-4033

Grupo Windmar
p/c Lcdo. Marc G. Roumain Prieto
1702 Ave. Ponce de León, 2do Piso
San Juan, Puerto Rico 00909

**Instituto de Competitividad y
Sostenibilidad Económica de
Puerto Rico**
p/c Lcdo. Fernando E. Agrait
701 Ave. Ponce de León
Edif. Centro de Seguros, Suite 401
San Juan, Puerto Rico 00907.

**Asociación de Industriales de
Puerto Rico**
p/c Manuel Fernández Mejías
2000 Carr. 8177, Suite 26-246
Guaynabo, Puerto Rico 00966



**Oficina Estatal de Política Pública
Energética**

p/c Ing. José G. Maeso González
Lcdo. Edwin J. Quiñones Porrata
P.O. Box 413314
San Juan, Puerto Rico 00940

Asociación de Hospitales de Puerto Rico

p/c Lcda. Marie Carmen Muntaner
Rodríguez
470 Ave. Cesar González
San Juan, Puerto Rico 00918-2627

For the record, I sign this in San Juan, Puerto Rico, today, January 10, 2017.

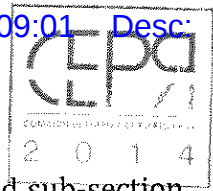
María del Mar Cintrón Alvarado
Clerk



Procedural History

TIMELINE AND HISTORY OF THE PROCEEDING

- **First Order on Rate Case Proceeding:** June 1, 2015. Pursuant to the requirements of Act 57-2014, which required PREPA to file its first rate case within one hundred and eighty (180) days of the approval of Act 57-2014, the Commission initiated the procedure by ordering PREPA to file a petition for rate reviews consistent with the regulation on filing requirements that was issued by the Commission on a later date.
- **Rate Case Petition Regulations Enacted:** July 24, 2015. The Commission enacted and approved Regulation No. 8620, known as the Regulation on Rate Filing Requirements for the Puerto Rico Electric Power Authority ("Regulation 8620"), which established the filing requirements for PREPA's first Rate Case. Regulation 8620 was enacted pursuant to the emergency procedures set forth in the Uniform Administrative Procedures Act ("UAPA"), as authorized by Article 6.20 of Act 57-2014.
- **Rate Case Petition Regulations Amended:** March 28, 2016. Although the Commission had ordered PREPA to file its first rate case through its May 29, 2015 Order, ongoing restructuring negotiations with PREPA's bondholders and main creditors forcibly postponed the filing until a clear understanding of PREPA's financial obligations was obtained. This resulted in the enactment of Act 4-2016, known as the PREPA Revitalization Act ("Act 4-2016"), which established the mechanism for the restructuring of PREPA's financial obligations and operational and administrative procedures. Act 4-2016 also amended several provisions of Act 57-2014 related to the review of PREPA's rates. As such, the Commission adopted a new regulatory framework consistent with the changes incorporated by Act 4-2016 and approved and enacted Regulation No. 8720, known as the New Regulation on Rate Filing Requirements for the Puerto Rico Electric Power Authority's First Rate Case ("Regulation 8720"). Regulation 8720 was enacted pursuant to Section 2.13 of the UAPA.
- **Request for Waiver:** March 30, 2016. In anticipation of its formal application for rate review and pursuant to Section 2.19 of Regulation 8620, PREPA filed a request seeking waiver from compliance of filing requirements set forth in Regulation 8620, specifically for subsections 3.02(D), 2.10(A) and 1.08(43). PREPA also requested clarification of sub-sections 3.02(A) and 2.10(C), which required PREPA to file to the Commission all reports from the Chief Restructuring Officer to PREPA's Board of Directors.
- **Response to Waiver Request:** April 13, 2016. The Commission issued an Order addressing PREPA's request for waiver in which it determined that the requests made related to sub-sections 3.02(D) and 1.08(43) were unnecessary and granted the



requested waiver for sub-section 2.10(A). The Commission also clarified sub-section 3.02(A) and 2.10(C) stating that such reports included information related to PREPA's overall performance and operations, which is relevant to review PREPA's actual costs.

- **Second Request for Clarification and/or Waiver:** May 4, 2016. PREPA filed a second request for clarification and /or waiver of certain provisions of Regulation 8720 with regards to the design and reconciliation of provisional rates.
- **Response to Second Clarification and/or Waiver Request:** May 12, 2016. The Commission issued an Order addressing PREPA's request for clarification and/or waiver. As a response to PREPA's clarification request regarding provisional rates, the Commission determined that PREPA should provide at least two (2) alternatives for the implementation of provisional rates, one contemplating the implementation of a uniform percentage change in base rates across all customers' classes and a second alternative contemplating the application of a specific percentage change in base rates for each customer class, provided that said percentage change must be applied uniformly within each class. With regards to the request for clarification of the reconciliation mechanism, the Commission deemed it as premature and deferred it to be solved further on in the proceeding.
- **PREPA's Verified Petition for Approval of Permanent Rates and Temporary Rates ("Petition"):** May 27, 2016. PREPA filed its Petition pursuant to Regulation 8720³²⁹. Along with PREPA's Petition, PREPA requested temporary rates pursuant to Section 6A(e) of Act 83, Section 6.25(d) of Act 57-2014 and Section 2.02 of Regulation No. 8720. In its Petition for temporary rates, PREPA proposed a distinct percentage increase to each customer class to recover what it considered to be a deficiency of \$222,256,790 (on an annual basis).
- **Determination of Filing Completeness:** June 13, 2016. The Commission issued a Resolution and Order in which it determined that PREPA's Petition was incomplete and issued a list of fourteen (14) specific findings of incomplete filing requirements³³⁰ that PREPA needed to provide to complete their Petition.

³²⁹ PREPA filed direct testimony of the following witnesses: Javier Quintana, Executive Director of PREPA; Lisa J. Donahue, Managing Director, AlixPartners, LLP and Chief Restructuring Officer; Panel Testimony of Sonia Miranda Vega, Director of Planning and Environmental Protection, Puerto Rico Electric Power Authority (replaced by Dr. Quintana); Antonio Perez Sales, Director, AlixPartners, LLP; Virgilio Sosa Director, AlixPartners, LLP; Panel Testimony of Ralph Zarumba, Vice President, Concentric Energy Advisors and Eugene Granovsky, Managing Consultant at Navigant Consulting; Panel Testimony of Francis X. Pampush, PhD, Director, Navigant Consulting, Inc; Lucas D. Porter, Managing Consultant, Navigant Consulting Inc.; and Dan T. Stathos, Associate Director, Navigant Consulting Inc.; Lawrence Kaufmann, PhD, Senior Advisor, Navigant Consulting, Inc.; and Ross Hemphill, PhD, Senior Advisor to Navigant Consulting, Inc.

³³⁰ See Attachment A of June 13, 2016 Resolution and Order on Docket No. CEPR-AP-2015-0001.



- **Determination of Provisional Rates:** June 27, 2016. The Commission granted PREPA's request for a temporary rate. The Commission determined that PREPA had complied with the requirements of Regulation No. 8720 and had demonstrated and justified the need of implementing provisional rates. The Commission approved a uniform rate increase of 1.299¢/kWh among all customer classes, the amount necessary to produce the \$222 million in new revenue.
- **Determination of Completeness:** July 15, 2016. The Commission issued a Resolution and Order in which it determined that the Petition, as supplemented by PREPA, was complete for purposes of Regulation 8720.
- **Interventions:** August 1, 2016 – August 5, 2016. The Commission received sixteen (16) requests for intervention and on August 12, 2016, through a Resolution and Order, the Commission granted intervention to fifteen (15) entities. The following parties were granted intervention: PV Properties, Inc., Windmar PV Energy Inc., Windmar Renewable Energy, Inc. and Coto Laurel Solar Farm, Inc. ("Windmar Group"); Commonwealth Energy Public Policy Office ("CEPPO"); Asociación de Consultores y Contratistas de Energía Renovable de Puerto Rico ("ACONER"); CEMEX de Puerto Rico, Inc. ("CEMEX"); Energy & Environmental Consulting Services Corp. ("ESCOPR"); Sunnova Energy Corporation ("Sunnova"); Independent Consumer Protection Office ("ICPO"); the Puerto Rico Aqueduct and Sewer Authority ("PRASA"); Instituto de Competitividad y Sostenibilidad Económica de Puerto Rico ("ICSE-PR"); Puerto Rico Industrials Association ("AIPR", for its Spanish acronym); Marketing, Industry and Food Distribution Chamber ("MIDA", for its Spanish acronym); Puerto Rico Hospitals Association ("Hospitals Association"); Centro Unido de Detallistas (*Retailers*) ("CUD", for its Spanish acronym); Puerto Rico Chamber of Commerce ("Chamber of Commerce"); and the Puerto Rico Construction Association ("ACPR", for its Spanish acronym or "Builders Association").³³¹ The Commission denied the Asociación Puertorriqueña de Energía Verde's ("APEV") request for intervention³³².

³³¹ The Commission granted ICSE-PR, Industrials Association, MIDA, the Hospitals Association, the Centro Unido de Detallistas, the Chamber of Commerce and the Builders Association subject to them coordinating their joint participation through a group denominated "Commercial and Industrial Associations Consortium" based on the striking similarities between the motions filed by the parties. The Commission determined the motions presented did not show the existence of a particular interest distinguishable from those of other Associations. ICSE-PR, AIPR, AHPR, and the Chamber of Commerce requested reconsideration of the Commission's determination to join the parties. After several procedural events and examining the parties' arguments, the Commission reconsidered its August 12, 2016 determination with regards to the joint appearance by the Associations.

³³² APEV requested reconsideration of the Commission's determination on September 1, 2016. The Commission denied APEV's request for consideration on September 15, 2016.



- **Commission Issues Procedural Timeline:** August 15, 2016. The Commission issued the Procedural Timeline for the Rate Case proceeding.
- **Discovery:** August 15, 2016 – September 19, 2016. Intervenors had the opportunity to conduct discovery regarding a diverse range of subjects related to PREPA's Petition.
- **Public Hearings:** September 10, 2016 – September 14, 2016. The Commission held four (4) public hearings in different places around the Island with the purpose of achieving a bigger citizen participation.³³³
- **PREPA Revised Testimony:** October 13, 2016³³⁴. Through Order of September 27, 2016 the Commission requested PREPA to submit supplemental or revised testimony and exhibits to ensure its Petition was up to date and consistent with events that had transpired and directly impacted many of the scenarios and assumptions in which PREPA based its Petition. In specific, the Order also requested that the revisions submitted by PREPA reflected the Final Resolution and Order on the Integrated Resource Plan, a per kWh Transition Charge for residential customers and necessary revisions due to the departure of Sonia Miranda, former Director of Planning and Environmental Protection³³⁵.
- **Intervenor Testimony:** October 25, 2016³³⁶. Intervenors filed their pre-filed written testimonies. For ACONER appeared witnesses Mr. Edward Previdi, PE, President of ACONER and economist Mr. Vicente Feliciano; for the Chamber of Commerce appeared witness Gerardo Cosme Nuñez, PE; for CEMEX appeared Mr. Enrique García, President and CEO of CEMEX and Manuel R. Valente, Director of Operations of CEMEX; for CUD appeared Mr. Nelson Ramírez; for the Builders Association, Mr. Emilio Colón Zavala, PR Vice President of the ACPR; for Hospital Association, Mr. Jaime G. Plá Cortés, Executive President of the Puerto Rico Hospital Association; for ICSE-PR appeared Mrs. Cathy Kunkel, Mr. Tom Sanzillo, Director of Finance for the Institute for Energy Economics and Financial Analysis and Dr. Victor Glass, Professor at Rutgers Business School; for the Industrials Association, Mr. Rodrigo Masses and Artze,

³³³ The public hearings were held on September 10, 2016 in Mayagüez, September 12, 2016 in Ponce, September 13, 2016 in Humacao and September 14, 2016 in San Juan.

³³⁴ The initial date to file the revised or supplemental testimony was October 11, 2016. On that same date, PREPA filed a request for extension, which was granted by the Commission by Resolution of October 12, 2016.

³³⁵ Mrs. Sonia Miranda retired mid case. Her testimony was adopted by the Executive Director, Javier Quintana-Méndez, PE.

³³⁶ The initial date per the Commission's published calendar to file Intervenor's pre-filed testimony was October 14, 2016, nevertheless after several changes to the procedural calendar the final date to file testimonies was set for October 25, 2016.



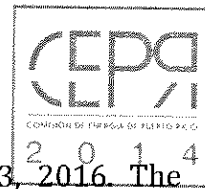
Chairman of the Board of Directors of the AIPR; for MIDA appeared Mr. Manuel Reyes Alfonso, Executive Vice-President for MIDA³³⁷; for CEPPPO appeared Mr. José G. Maeso González, EIT, Director of the CEPPPO; for the ICPO appeared Dr. Guillermo M. Riera, PE; for PRASA appeared Mrs. Lynnette M. Ramírez Rivera, Executive Director of Infrastructure; for Sunnova appeared economist Mr. Steven Gabel; and for Windmar, Mr. Víctor L. González.³³⁸

- **Discovery on Intervenor's Pre-Filed Testimony:** October 28, 2016 – November 2, 2016. PREPA and the Commission had the opportunity to conduct discovery related to the matters addressed by Intervenors in their testimonies.
- **Technical Conference Calls:** October 20, October 31, November 9 and November 15, 2016. The Commission Staff held several Technical Conference Calls to clarify subjects and issues that were addressed during the Commission's discovery process to PREPA. Both PREPA and intervenors participated in the Conference Calls.
- **Hemphill Updated Testimony:** November 14, 2016. On October 14, 2016, PREPA filed a supplemental testimony of Dr. Ross Hemphill. The Commission, through Resolution of October 27, 2016, requested PREPA to update Dr. Hemphill's testimony to answer how his proposed formula rate mechanism provided the Commission with the resources to prevent PREPA from incurring in costs that are not prudent and reasonable.
- **Rebuttal Testimony:** November 16, 2015³³⁹. The parties had the opportunity to file written rebuttal testimony to any testimony filed by any of the intervenors.
- **Rebuttal Testimony Late Filing:** November 16, 2016. On November 14, 2016, PREPA filed part of its rebuttal testimony accompanied by a motion notifying the Commission that it was not able to file in time the rebuttal testimonies of Javier Quintana-Méndez, Lisa Donahue and the panel testimony of Javier Quintana-Méndez, Antonio Pérez Sales and Virgilio Sosa due to lack of availability from the witnesses to approve the final versions. The Commission denied PREPA's request for leave to file the testimonies through Resolution of November 21, 2016.

³³⁷ On November 15, 2016, MIDA filed a motion notifying its intent to desist of their intervention in the instant proceeding. The Commission, through Resolution and Order of November 17, 2016, took notice of MIDA's motion and accepted the resignation. The Commission also stroke MIDA's testimony from the record and ordered all parties to disregard MIDA's filings in the present case when addressing any issues on the proceeding.

³³⁸ Environmental Consulting Services Corp. did not file a pre-filed written testimony.

³³⁹ The initial date to file the rebuttal testimony was November 10, 2016. On that same date PREPA filed a request for extension to November 16, 2016, which was granted by the Commission by Resolution of November 14, 2016.



- **Commission's Expert Reports:** November 21, 2016 – November 23, 2016. The Commission published five reports authored by the Commission's technical consultants, to provide all parties an opportunity to comment on the analysis conducted, and recommendations made. The Commission's decision to publish its consultant's reports was consistent with the provisions of Act 57-2014 regarding the transparency of the proceedings. Therefore, to promote transparency, the Commission chose to make all analyses and recommendations public and allow the parties to question them at the technical hearings. The above was decided with the interest of achieving a well informed and duly grounded final determination. The reports addressed the following subjects: Revenue Requirement Equation, authored by Ralph Smith and Mark Dady³⁴⁰; Financial Issues, authored by Steven Hill³⁴¹; Reasonableness of Costs, authored by Dr. Jeremy Fisher and Dr. Ariel Horowitz³⁴²; Revenue Allocation, Rate Design and Distributed Generation, authored by Paul Chernick³⁴³; and Methods for Updating Rates and Ensuring Prudence, authored by Tim Woolf³⁴⁴.
- **Technical Hearings:** November 29, 2016 – December 16, 2016. The Commission held a technical hearing consisting of nine (9) panels organized by subject matter based on the parties' testimonies. During each panel the Commission and parties questioned the parties' expert witnesses and Commission's technical consultants with regards to their testimony and expert reports.
- **Parties Substantive Briefs:** December 27, 2016. The parties had the opportunity to file substantive briefs before the Commission. On December 19, 2016, the Commission issued a set of directives and questions to guide the parties' discussion on substantive matters. The following parties submitted their briefs ACONER, Sunnova, CEMEX, ICPO, Windmar, ICSE-PR, PRASA and PREPA.
- **Parties Legal Briefs:** December 28, 2016. The parties had the opportunity to file substantive briefs before the Commission. On December 20, 2016, the Commission issued a set of directives and questions to guide the parties' discussion on legal

³⁴⁰ Ralph Smith, Certified Financial Planner professional, Certified Rate of Return Analyst, and licensed Certified Public Accountant and attorney with Larking & Associates and Mark Dady, certified public accountant and regulatory analyst with Larkin & Associates.

³⁴¹ Steven Hill, financial consultant, and principal of Hill Associates.

³⁴² Dr. Jeremy Fisher, Principal Associate at Synapse Energy Economics, Inc., and Dr. Ariel Horowitz, Senior Associate at Synapse Energy Economics.

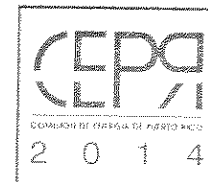
³⁴³ Paul Chernick, President of Resource Insight, Inc.

³⁴⁴ Tim Woolf, Vice President at Synapse Energy Economics.



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* * *



Summary of Witness Testimonies

Puerto Rico Electric Power Authority

Summary of the Testimony of Javier Quintana Méndez, Ph.D., P.E., Executive Director³⁴⁵

Dr. Quintana's direct testimony provides background and basic information for purposes of the rate review. His testimony describes at a high level PREPA's structure, mission, and vision as a public power electric utility. He also discusses, at a high level, what PREPA is doing to mitigate rate increases with its business plan and the focused efforts to improve PREPA and its operations that began in summer 2014 and continue to this day and going forward. He also provides a high level overview of PREPA's rate Petition, reasons for the rate review filing and rate impacts for PREPA customers. He also provides a "road map" to the other testimony filed with the Petition. In addition, Dr. Quintana adopted the panel testimony of Sonia Miranda (PREPA Ex. 3.0) after Ms. Miranda retired.

Dr. Quintana's supplemental direct testimony responds to the Commission's questions in its September 27, 2016, Order. He summarizes key events that have occurred since PREPA first filed its case, presents and explains PREPA's current conclusions about how the Commission's Integrated Resource Plan ("IRP") Order of September 23, 2016 could affect PREPA's revenue requirement for Fiscal Year ("FY") 2017 and PREPA's business plans for FY2017, 2018, and 2019. His testimony also provides a "road map" to the other Supplemental Direct Testimony filed by PREPA.

He also testified as part of many Panels at the technical hearing. Among the many subjects he discussed were PREPA's needed rate increase, its financial condition and debt restructuring efforts (in part confidential testimony), development of PREPA's budget, contract relations with union laborers, and the need for AOGP and the absence of realistic alternatives.

Summary of the Testimony of Lisa J. Donahue, Managing Director, AlixPartners, LLP and Chief Restructuring Officer

Ms. Donahue's direct testimony in support of permanent rates discusses issues related to PREPA's financial condition. She discusses PREPA's financial and liquidity situation and how it must be addressed, particularly in relation to this rate review. She also discusses the efforts to restructure PREPA's debt, how this rate review addresses the debt and liquidity issues, and PREPA's immediate liquidity crisis that requires immediate action.

Ms. Donahue's direct testimony in support of provisional rates discusses PREPA's liquidity crisis and how it relates to PREPA's provisional rates request. Her rebuttal

³⁴⁵ Dr. Quintana's rebuttal testimony was not allowed since it was filed late. See Resolution, CEPR-AP-2015-0001, November 21, 2016.



testimony was not allowed as late. She testified during multiple Panels at the technical hearing, including on the subject of debt restructuring efforts (in part confidential testimony), among others.

Summary of the Testimony of Sonia Miranda Vega, Director of Planning and Environmental Protection, Puerto Rico Electric Power Authority (replaced by Dr. Quintana); Antonio Perez Sales, Director, AlixPartners, LLP; Virgilio Sosa Director, AlixPartners, LLP.³⁴⁶

The Business Plan Panel's direct testimony provides an overview of PREPA's recovery plan and explains how the rate deficiency has been cut by 60% to significantly mitigate the rate increase. It also explains PREPA's historical operational and service issues and describes how PREPA's Business Plan was developed to address them. The panel testimony describes the Business Plan and the progress to date in generating savings for PREPA customers, discusses the expected savings to be achieved going forward for PREPA customers, and describes how the Business Plan (and update to it) served as a basis for the known and measurable changes proposed to the 2014 test year revenue requirement. Finally, it provide support for PREPA's capital expenditures and operating expenses included in the rate filing.

The panel testified as part of the technical hearing on multiple Panels, supporting operating expenses and AMI meter capital spending, among many topics. In particular, Mr. Sosa testified at Panel D of the technical hearing in support of outage costs and other information. He conducted an analysis of the severity and frequency of forced outages between 2013 and 2014, and conducted a cost analysis of various factors and the impact to the consumer. The increase in severity of outages is affected by PREPA's ability to procure and contract the necessary contractors to repair the unit. Mr. Pérez also testified on several panels, including Panel E, where he supported PREPA's budget allocations, particularly costs associated with labor and the replacement of meters. Mr. Pérez also testified regarding the limits on performance bonuses and the benefits of allowing incentives.

Summary of the Testimony of Ralph Zarumba, Vice President, Concentric Energy Advisors and Eugene Granovsky, Managing Consultant at Navigant Consulting.

Mr. Zarumba and Mr. Granovsky's first piece of direct testimony (PREPA Ex. 4.0) presents and supports what is commonly referred to as the "rate design" of the proposed "permanent" rates. Mr Granovsky and Mr. Zarumba explain that the proposed rate design: (1) updates tariffs to reflect the costs of the utility; (2) gives PREPA the opportunity to recover its "revenue requirement" (its costs of offering and providing service to its Customers); (3) moves toward a more equitable allocation of the revenue requirement to Customers; (4) implements legislative initiatives; (5) promotes a clean energy solution; and (6) improves the transparency of rates and bills. Mr. Zarumba and Mr. Granovsky's second piece of direct testimony (PREPA Ex. 8.0) presents and supports what is commonly referred to as the embedded cost of service study or "ECOSS". The ECOSS study is used in the

³⁴⁶ Their rebuttal testimony was not allowed as late.



development of rates to assign or allocate a portion of a utility's overall "Revenue Requirement" to each of the utility's separate Tariff Rate classes. Their testimony describes the process used to develop the ECOSS and provides the results of the ECOSS studies for three scenarios. Mr. Zarumba and Mr. Granovsky's supplemental direct testimony (PREPA Ex. 15.0) revises the residential rate design previously filed in their direct testimony. Their testimony includes: an explanation of the changes in the design of the Transition Charge for residential customers; a discussion of why a change in the residential pricing design is required; the proposed changes in the residential pricing design; errata with respect to cost of service information and proposed pricing design; revisions to PREPA's Marginal Cost Worksheet; and revisions to the proposed pricing design which result from the above changes including revised tariff sheets.

Mr. Zarumba and Mr. Granovsky's rebuttal testimony revises the proposed tariffs to reflect changes in the format of the revenue requirement identified by the Revenue Requirement Panel and updated marginal energy costs attributable to a change in the fuel and purchased power costs projections. Their testimony also responds to certain topics and issues raised in specific intervenor testimony, addresses pricing issues for Distributed Energy Resources ("DER"), and responds to certain practical and mechanical challenges introduced in the Commission's November 3rd Resolution limiting the pricing design topics in this proceeding. Mr. Zarumba and Mr. Granovsky testified on multiple Panels at the technical hearing, supporting the rate design and cost of service studies, among many topics.

Summary of the Testimony of Francis X. Pampush, Ph.D., Director, Navigant Consulting, Inc; Lucas D. Porter, Managing Consultant, Navigant Consulting Inc.; and Dan T. Stathos, Associate Director, Navigant Consulting Inc.

The Revenue Requirement Panel's testimony provides the results of their original analysis of PREPA's historical and current investments in electric plant in service and its costs of operation to serve its customers, as well as costs of debt. This analysis focuses on PREPA's financial requirements starting with Fiscal Year 2014 in accordance with the Commission's rules and then looking at known and measureable adjustments, in order to develop the revenue requirements as of FY2017 sufficient to allow PREPA to meet its obligations to provide safe, reliable, and reasonably priced electric power and services to its residential, industrial, commercial, and governmental customers. The panel also describes their approach to the development of revenue requirements that provides a reasonable basis for rates to be proposed to the Commission, including evaluations using three different methodologies: an evaluation of PREPA's cash needs to meet its obligations, the Modified Cash Basis ("MCB"), which they found to be the most suitable approach; an evaluation of revenues sufficient to provide a minimum Debt Service Coverage Ratio ("DSCR"); and an evaluation of the revenues required to produce a reasonable return on Rate Base (i.e., the net investments in its system on which it should earn a return of and on that investment) under traditional Accrual Basis (Rate Base/Rate of Return) regulation. The panel chose the MCB model on its merits, which yielded the lowest of the three revenue requirement figures. The panel also describes the impact on rates and costs of capital from a longer term financial perspective and the financial profile that PREPA should seek to attain as a condition of regaining access to credit markets. This section provides some identifiable metrics that can



be tracked for progress. The revenue requirement panel's supplemental direct testimony responds to the Commission Order dated September 27, 2016, requesting PREPA to provide revisions to the revenue requirement to reflect certain considerations consistent with the Commission's Integrated Resource Plan ("IRP") Order of September 23, 2016, and provides errata to previously filed testimony.

The Revenue Requirement's rebuttal testimony provides certain revised schedules that reflect a correction in the way that Contributions in Lieu of Taxes ("CILT") and Subsidies are handled in the calculation of PREPA's revenue requirements. It also responded to various intervenors regarding revenue requirements and pass-through fuel and purchased power costs. This correction yields a base rate revenue requirement of \$2,732,427,174, and a base rate increase of \$178,164,977. The revenue requirement panel also testified on many subjects during the technical hearing.³⁴⁷ Mr. Stathos, Dr. Pampush, and Mr. Porter testified on multiple Panels at the technical hearing, supporting PREPA's revenue requirement and its calculation, among other topics.

Summary of the Testimony of Lawrence Kaufmann, Ph.D., Senior Advisor, Navigant Consulting, Inc.

Dr. Kaufmann's direct testimony presents benchmarking evidence on PREPA's cost performance relative to a number of peer utilities. This evidence suggests that PREPA's internal cost management is not the primary factor in PREPA's financial difficulties. In other words, past imprudence in spending, if any, is not a primary driver of the needed rate increase.

Dr. Kaufmann's direct testimony responds to the testimony of ICSE-PR witnesses Tom Sanzillo and Cathy Kunkel regarding benchmarking and the reasonableness of PREPA's costs and revenues in comparison with other utilities. He supports his direct testimony and refutes the ICSE-PR testimony. He also testified at the technical hearing, including explaining the purposes of the benchmark testimony.

Summary of the Testimony of Ross Hemphill, Ph.D., Senior Advisor to Navigant Consulting, Inc.

Dr. Hemphill's direct testimony (PREPA Ex. 7.0) supports PREPA's proposed Formula Rate Mechanism ("FRM"). He discusses the advantages of formula ratemaking versus the traditional rate case approach, PREPA's proposal for an FRM and explains how it would operate and what annual filings PREPA would make as part of the proposed process. He also discusses why a formula approach is particularly suited to PREPA's current situation. Dr. Hemphill's supplemental direct testimony (PREPA Ex. 16.0) provides additional detail about

³⁴⁷ PLEASE NOTE: The foregoing figures do not reflect (1) Staff's adjustment for fuel costs increase, which should be adopted but simply adds to the pass-through of fuel costs; and (2) the associated Staff bad debt expense adjustment, which also should be adopted, and which does affect base rates.